6 Questions About Hot Box Detectors

September 12, 1960

RAILWAY AGE *weekly*

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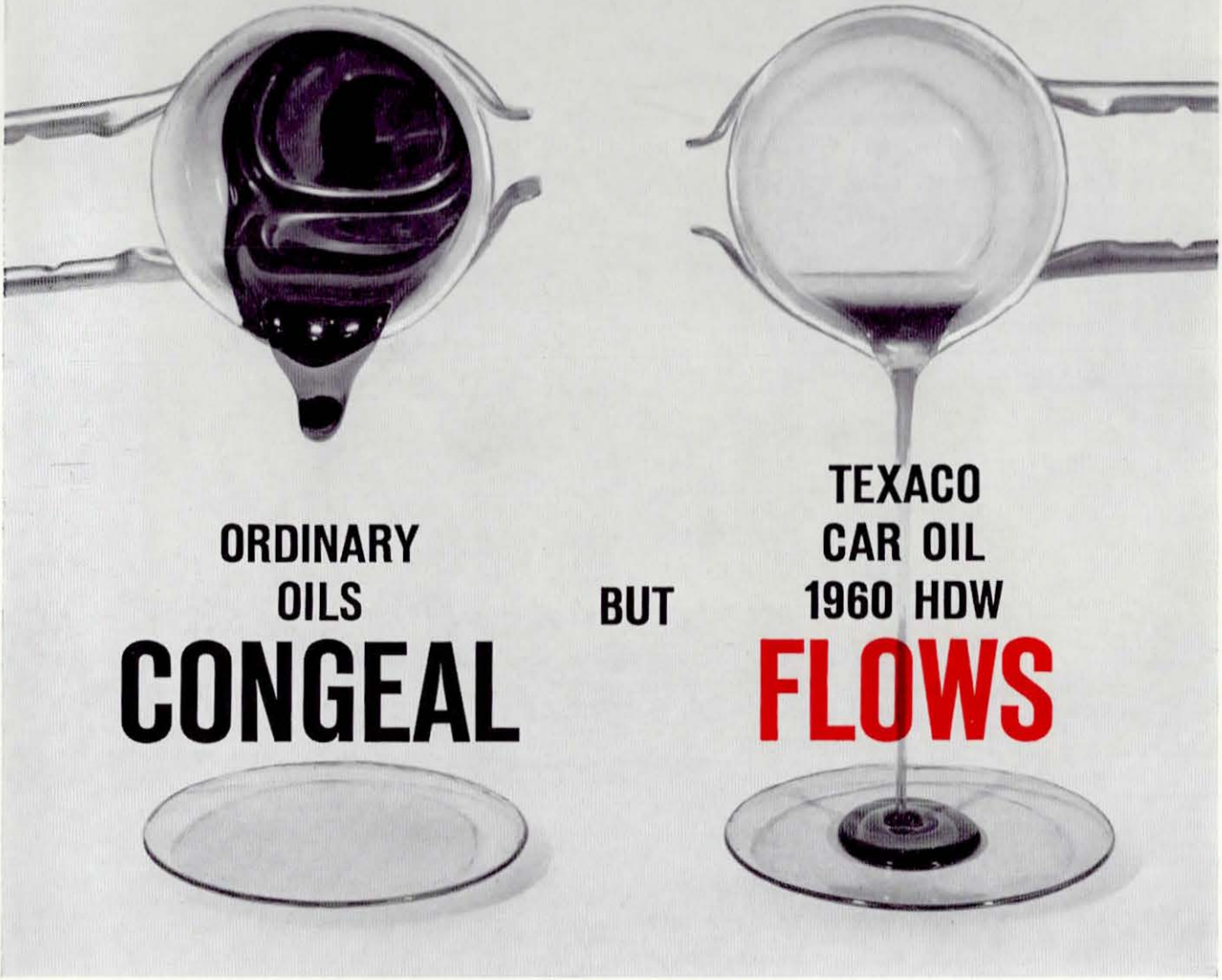

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W —Warm bearing
H —Hot bearing
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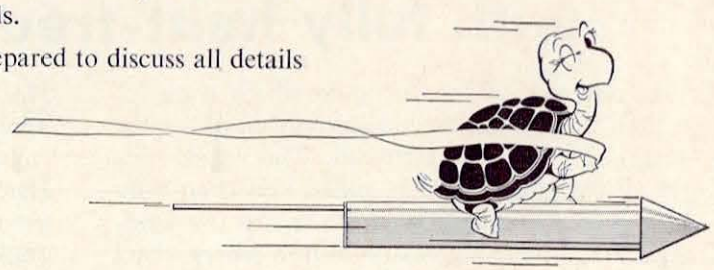

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RAILWAY AGE *weekly* September 12, 1960 • Vol. 149, No. 11

Week at a Glance

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Work rules commission coming? ..... p. 9

Railroad and union representatives meeting in Chicago this week may agree to send the work rules dispute to a special tripartite commission for study. Labor Secretary Mitchell will meet with representatives of both groups to try to reach agreement on scope and authority of a commission.

Strikes spread to other roads p.23

Negotiations continued between the PRR and TWU as the PRR strike entered its second week. Elsewhere, striking trainmen continued the tie-up of the Grand Trunk Western and shut down four rail subsidiaries of United States Steel Corp.

Cover Story—How B&O keeps diesels busy p.30

A new 12-man team has helped the road cut operating expenses, improve its train performance and step up diesel utilization. The group, with full authority over operation of all B&O motive power, is responsible for having diesel units at the right place at the right time so that traffic moves smoothly and on schedule.

Cover Story—Six questions about hotbox detectors p.50

One answer to the hotbox problem is the automatic detector, —which doesn't prevent hotboxes, but catches them in time to prevent serious consequences. Here are some key questions—and a compilation of answers—about how to use detectors most effectively.

The BAR builds conveyor produce car p.56

A push-button car for transporting fruits and vegetables has been developed by the Bangor & Aroostook. Its design permits an increased payload and considerably reduces the labor involved in loading and unloading.

Tank body cuts hopper weight p.60

A teardrop-shaped tank is a feature of four aluminum covered hopper cars just built for the Canadian National and the Roberval & Saguenay. The cars—designed by the CNR and the Aluminum Co. of Canada—can each carry ten tons more payload than conventional cars.

Tax experts hear railroad woes p.65

Rail tax problems came in for extended discussion at the 53rd annual conference of the National Tax Association. Two

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Week at a Glance CONT

Current Statistics

Operating revenues	
7 mos., 1960	$5,647,350,460
7 mos., 1959	5,846,964,866
Operating expenses	
7 mos., 1960	4,468,305,006
7 mos., 1959	4,552,546,451
Taxes	
7 mos., 1960	616,918,640
7 mos., 1959	632,589,611
Net railway operating income	
7 mos., 1960	354,373,380
7 mos., 1959	462,418,217
Net income estimated	
7 mos., 1960	248,000,000
7 mos., 1959	339,000,000
Carloadings revenue freight	
34 wks., 1960	20,372,528
34 wks., 1959	20,655,222
Freight cars on order	
Aug. 1, 1960	26,658
Aug. 1, 1959	40,309
Freight cars delivered	
7 mos., 1960	35,295
7 mos., 1959	22,545

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points in particular were stressed; inequitable property assessments, and the relationship between taxation and urban transportation problems.

Engine upgrading cuts L&HR maintenance costs p.76

Lehigh & Hudson River motive power repair costs have dropped from an average 12 cents per gallon of fuel consumed to 8½ cents in 1959. The road says two things are responsible: upgraded power and a realistic maintenance program.

14 roads get Harriman awards p.77

Top safety records of 1959 will be honored this week at the annual dinner presentation of the E. H. Harriman Memorial Awards by the American Museum of Safety.

The Action Page: Buy cars — or say why not p.82

Railroads spend liberally for new equipment and other capital improvements, when they have the money. When they don't have the money, they usually maintain a discreet silence. Is such silence wise?

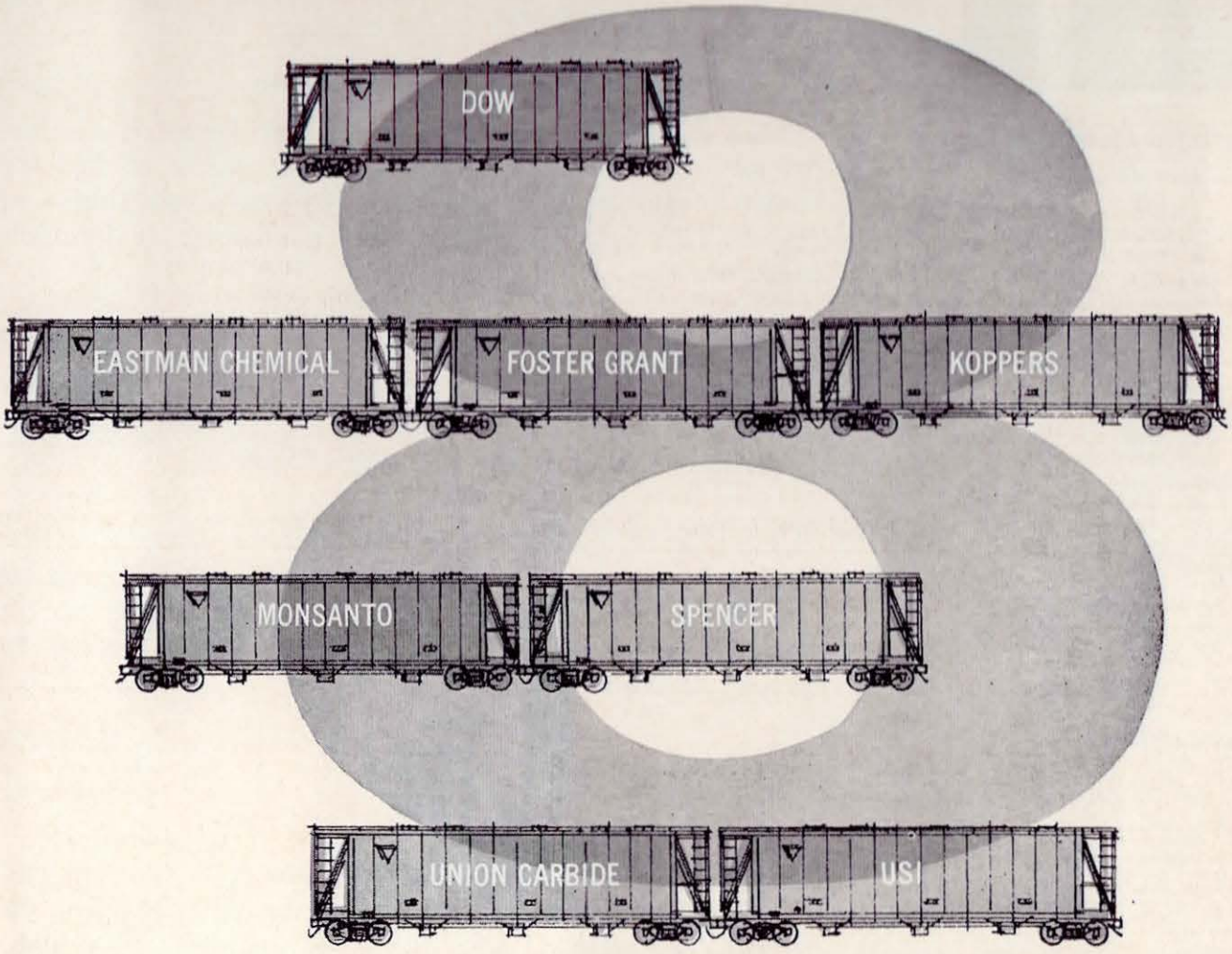
Short and Significant

Decline of $91 million in net income . . .

for Class I railroads is estimated by the AAR for this year's first seven months compared with the corresponding 1959 period. The estimate puts this year's seven-months' net at $248 million, compared with $339 million last year. Twenty million dollars of the drop is accounted for by July's showing. The estimated net for that month is $11 million, compared with July 1959's $31 million. Thirty-one Class I roads failed to earn their fixed charges in this year's first seven months. Rate of return for the 12 months ended with July averaged 2.33%.

Passenger service study . . .

sponsored by Railway Progress Institute two years ago was back in the news last week as a result of a Sept. 12 story in Newsweek. An RPI spokesman, disclaiming any connection with the news story, pointed out that the report "served its purpose, and is now pretty much out of date." The report was circulated to railroad officers on a restricted basis back in 1958; it is understood to have contained suggestions for fare cuts to increase patronage, the operation of larger but fewer passenger cars, more aggressive promotion and improved operating efficiency. RPI's passenger committee is now engaged in studies in an "entirely different area," according to an Institute officer.



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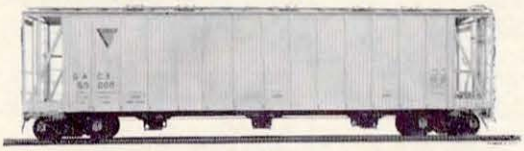

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Work Rules Commission Coming?

► **The Story at a Glance: Railroad and union representatives could agree this week to send the complex work rules dispute to a special tripartite commission for review and study.**

Secretary of Labor Mitchell will meet Wednesday morning, Sept. 14, in Chicago with six-man subcommittees from both the carriers conference committees and the five operating brotherhoods "to discuss and attempt to draw up a memorandum outlining a basis of understanding as to how such commission should operate and the scope of its authority." Subcommittees apparently will be empowered to negotiate a study plan, which would then go to full committees for ratification.

If management and labor agree to creation of a study commission—and it's expected that they will—the action will put actual rules revision off for at least a year, perhaps longer. All indications point to a comprehensive, searching, penetrating study of railroad work rules—not, by any means, a once-over-lightly review.

There's no agreement—yet—to put the intricate work rules issue in the hands of a special study commission. But Secretary of Labor Mitchell is "very hopeful" that agreement will be reached when he meets again with management and union representatives.

His optimism stems from separate discussions of the problem with the carriers and the unions—and particularly from a joint session last Wednesday, at which both sides agreed to assign subcommittees to meet again this week to try to iron out the details of a commission study plan (RA, Aug. 29, p. 9).

Organizational and procedural matters must be agreed upon—but indications were, following last Wednesday's "exploratory" session, that the carriers and the brotherhoods don't differ beyond hope of compromise. Among the many points to be settled:

- Make-up of the commission. Should the three parties—carriers, unions and the public—be represented equally? Or should public representation equal combined management-labor representation? Will the organizations insist on representation from each of the five unions?
- Procedure for the inquiry. Should the study follow arbitration or emergency board practice, where each side presents testimony, files briefs, makes rebuttal? Or should expert staff personnel be retained to make investigation under the direction of the commission?
- Scope of inquiry. Secretary Mitchell's comments have cited "work rules" and "work practices." But certain of the unions' counterdemands of Sept. 7 don't appear to fit that frame of reference. The brotherhoods, by their Sept. 7 notice, indicate they want the study to embrace both the carrier demands of last Nov. 2 and the unions' counterdemands.
- Weight of the findings and report. Recent discussion of a commission study was deadlocked, with the carriers holding out for a binding decision and the brotherhoods balking at giving a commission more than merely the power to recommend change. It's unlikely that the carriers would have agreed to the subcommittee study without some confidence that the inquiry will come to grips with basics—and carry weight in leading to a settlement. This is expected to be one of the major points to be discussed by the subcommittees.

Even with many details to be compromised, however, Secretary Mitchell expressed nothing but confidence that the commission plan—which management, labor and the Secretary himself have all proposed in one form or another, at one time or another—will get the required approval of both sides.

Both carrier and union officers have met separately with the Secretary in recent weeks. Last week's session in Chicago was the first joint meeting and was, in Secretary Mitchell's words, "an

Gilbert Calls C&NW Petition 'Publicity Gimmick'

On Aug. 31, the Chicago & North Western petitioned the Illinois Commerce Commission to investigate its suburban operating practices and, in the exercise of the commission's statutory power to establish safe and reasonable standards for operation of public utilities, to prescribe that push-pull trains in commuter service may be safely operated without firemen.

Prompt reaction to the C&NW action came from H. E. Gilbert, president, BLF&E. Said Mr. Gilbert:

"The C&NW Railway has demonstrated a shocking disregard for public safety in seeking removal of locomotive firemen helpers from trains used in the railroad's high-speed commuter service.

"No automatic device can replace the fireman helper who serves as a mechanical aid and assistant to the engineer and most importantly as a safety lookout.

"The BLF&E views the C&NW petition to the Illinois Commerce Commission as a publicity gimmick.

"While the brotherhood respects the powers vested in the commission, it must be recognized that whatever action the commission may take, it can't disregard the legal contract existing between the brotherhood and the railway. The contract provides for use of locomotive firemen helpers on C&NW locomotives.

"Obviously the railroad hopes to use the commission as a publicity vehicle. The brotherhood sincerely hopes that the commission members reject the railroad's contention and censure the carrier for attempting to misuse the good offices of the commission."

exploratory meeting looking toward agreement from both [management and labor] on establishment eventually of a Presidential commission which would make a study of the entire work rules problem in the railroad industry."

He described the rules situation as "a very, very complex problem." No time limitations have been placed on a commission study and none may be—but, the Secretary noted, "it certainly is not going to be a short time."

The whole object of the commission approach, he said, is "to prevent work stoppage . . . and to look at the rules in the railroad industry and work practices which need modernization . . .

"Everyone recognizes," he added, "that . . . the whole problem is so complex, so difficult, that the usual presidential emergency board could not possibly handle it."

He conceded that President Eisenhower once rejected a carrier request for establishment of a Presidential study commission—in 1959, before rules notices were served and after management had tried unsuccessfully to secure union approval of a commission proposal. But, the Secretary said, since then "time . . . and completion of the wage dispute" have intervened. He said he has discussed the present situation with President Eisenhower and "he would look with favor on any method to bring about stability in railroad labor relations."

Secretary Mitchell said he has "every hope that an understanding can be arrived at . . . The fact that both [management and labor] agreed to meet leads me to believe both are seriously considering the [commission] idea." If any such study of the issues is to be fruitful, he added, "it must necessarily have the full concurrence of both sides." There is no prediction as to whether the Sept. 14 meeting will produce agreement. Further conferences could be necessary.

Two members from each of the three regional conference committees will represent the railroads on their subcommittee. The grand chiefs of the five unions (the BLE, BLF&E, BRT, ORC&B and SUNA), plus A. F. Zimmerman, BLE assistant grand chief, will represent the unions.

Last week's meeting opened with presentation of the unions' joint counterproposals by H. E. Gilbert, BLF&E president and spokesman for the brotherhoods. Then Secretary Mitchell brought up the study commission proposal for a discussion which ended in the agreement to appoint subcommittees and meet again this week.

While the matter of a commission is pending, both the carriers' notices of last Nov. 2 and the operating unions' proposals of last week will be held in abeyance. Presumably this will also hold true for the separate counternotices served some time ago by SUNA.

The carriers, in a campaign to revise rules to cut waste which they say is costing the industry $500,000,000 annually, are seeking six basic rules changes. In brief, their proposals would:

- Revise 1920-era pay standards for engine and train crews to reflect today's increased train speeds. A companion proposal would end union spread-the-work rules which restrict mileage covered by operating employees and thus restrict their earnings.
- Eliminate rules barring crews from operating through present crew-change points.
- Wipe out arbitrary lines between work which may be performed by road and yard crews. The proposed rule would permit interchange of these crews without penalty payments.
- Establish the right for management to determine when firemen should be used on other-than-steam locomotives in road freight and yard service.
- Eliminate rules stipulating the number of crew members required and allow management to determine where to use conductors, trainmen, engineers and others.
- Wipe out rules requiring standby operating employees where self-propelled equipment is used in track maintenance, repair or inspection.

Of these six, revision of 40-year old pay standards and elimination of the fireman position in freight and yard service are the most significant, from a monetary standpoint. Of the $500,000,000 annual waste laid to operations under outmoded rules, about $200,000,000 is pegged as the cost of employing unneeded firemen. An estimated $150,000,000 could be saved through the proposed changes in the dual-pay system.

The brotherhoods held off on serving counterdemands until last Wednesday, when uniform notices were served on individual railroads (with instructions to general chairmen to request that individual conferences be waived and that the notices be referred to national handling immediately).

Union demands call for negotiation of agreements to provide for:

- Improvements in the wage structure.
- Consist of crews including the "adequacy" of the number of men in the crew, their qualifications and training.
- "Financial and other protection" for employees affected by "mergers, consolidations, abandonments, technological changes in operations, or by changes in working conditions."
- Stabilization of employment.

In addition, the five organizations proposed establishment of a study commission to "function in general conformity with the recommendation of Emergency Board No. 109" (RA, Sept. 5, p. 9).

Since February 1959, when AAR President Daniel P. Loomis made his "Year of Decision" address in St. Louis and opened the industry's campaign against make-work rules, study commissions have been proposed from all angles:

- Mr. Loomis' original suggestion was for the brotherhood chiefs to join management in asking the President "to name a non-partisan group of distinguished citizens" to study the whole question. Union leaders refused to agree, the carriers finally went to the White House on their own and the President rejected their request.
- Secretary Mitchell, earlier this year, told a brotherhood institute at the University of Iowa that complex problems such as the work rules dispute might better be settled away from the bargaining table and out from under the built-in deadlines of the Railway Labor Act. Since long before that, he says, he had been talking informally with union leaders with the same idea in mind.
- The operating unions on July 6 proposed establishment of a commission with far-ranging scope to study and make recommendations. The carriers objected to the virtually unlimited scope of inquiry and to the non-binding nature of the proposed commission's report.

Watching Washington with Walter Taft, which normally appears in this space will be found on page 78 of this issue.

CNR Completes New Line In Northern Manitoba

Canadian National's new 52-mile branch line between Optic and Chisel lakes in Northern Manitoba was officially opened last week. The last spike was driven by J. L. Charles, CNR consulting engineer, at Chisel Lake. Mr. Charles directed the line's construction.

The new rail line serves the Hudson Bay Mining and Smelting Co., Ltd.'s new mines in the area. It marks the third time in seven years that CNR has opened a new railway line in the northern part of Manitoba. Mr. Charles pointed out that, "during the last decade, the CNR has constructed 593 miles of branch lines to serve Canada's mining industry."

Following the last-spike ceremony, the first car of ore from the Chisel Lake mine was loaded and shipped to Hudson Bay Mining and Smelting Co.'s smelter at Flin Flon.

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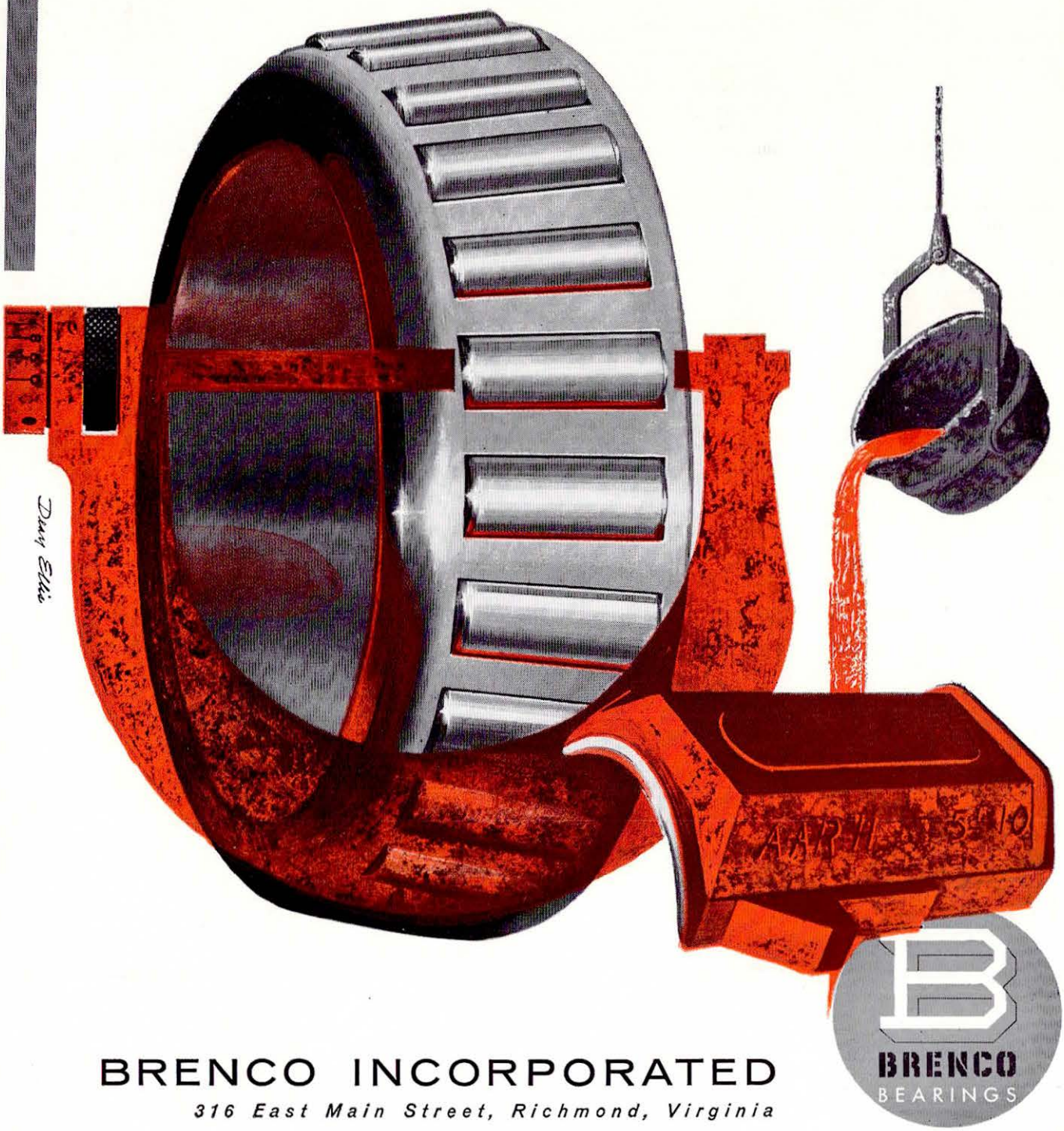

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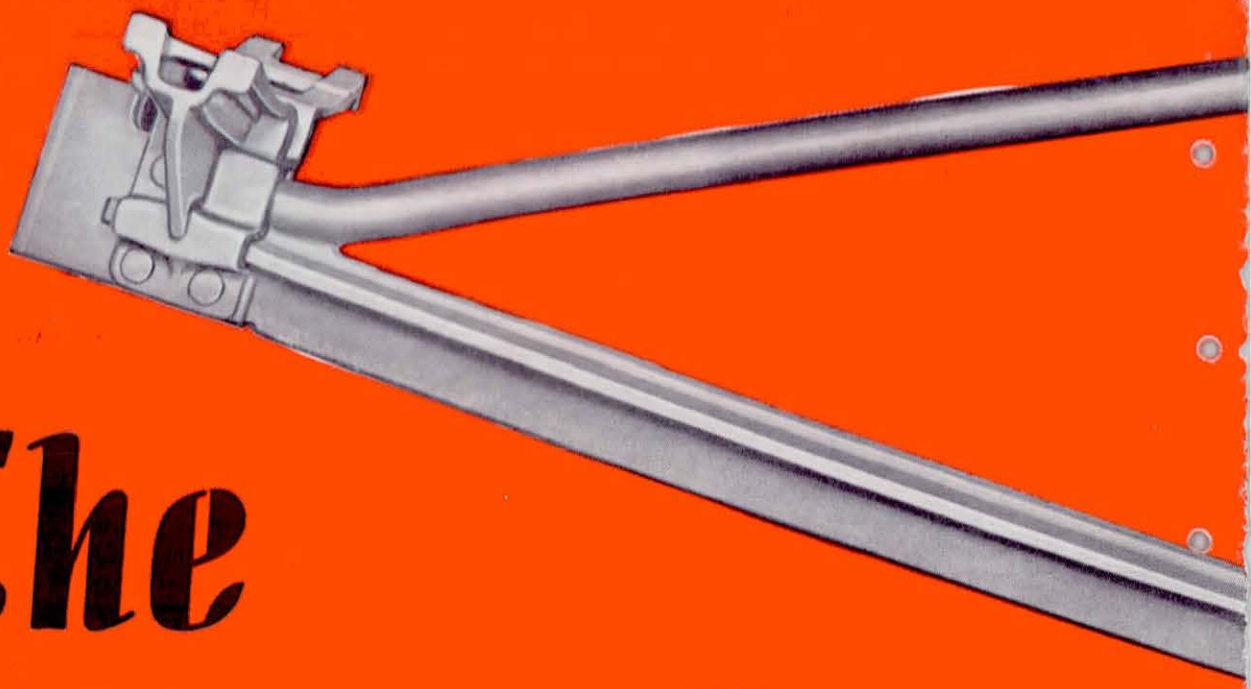

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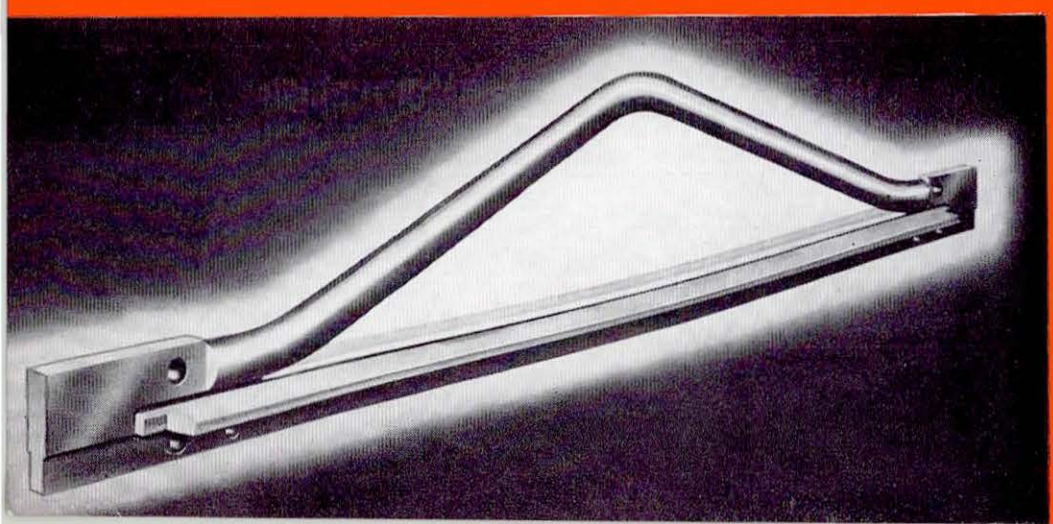

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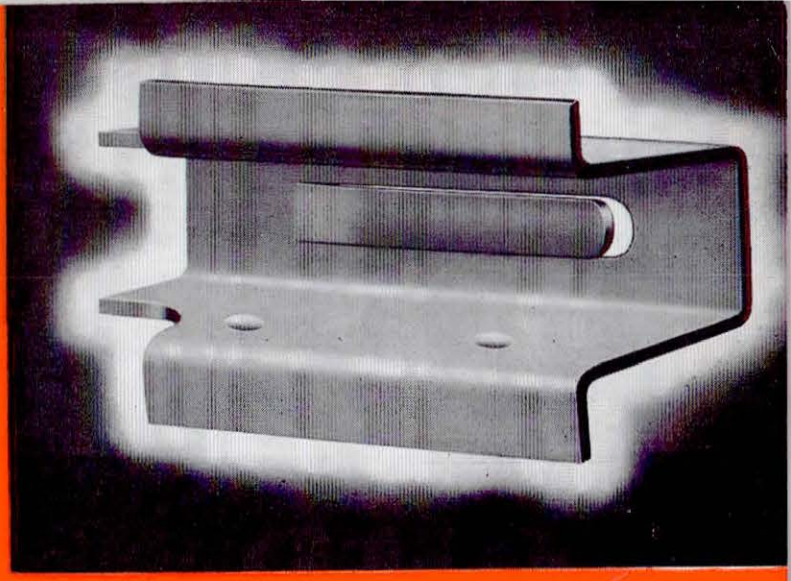

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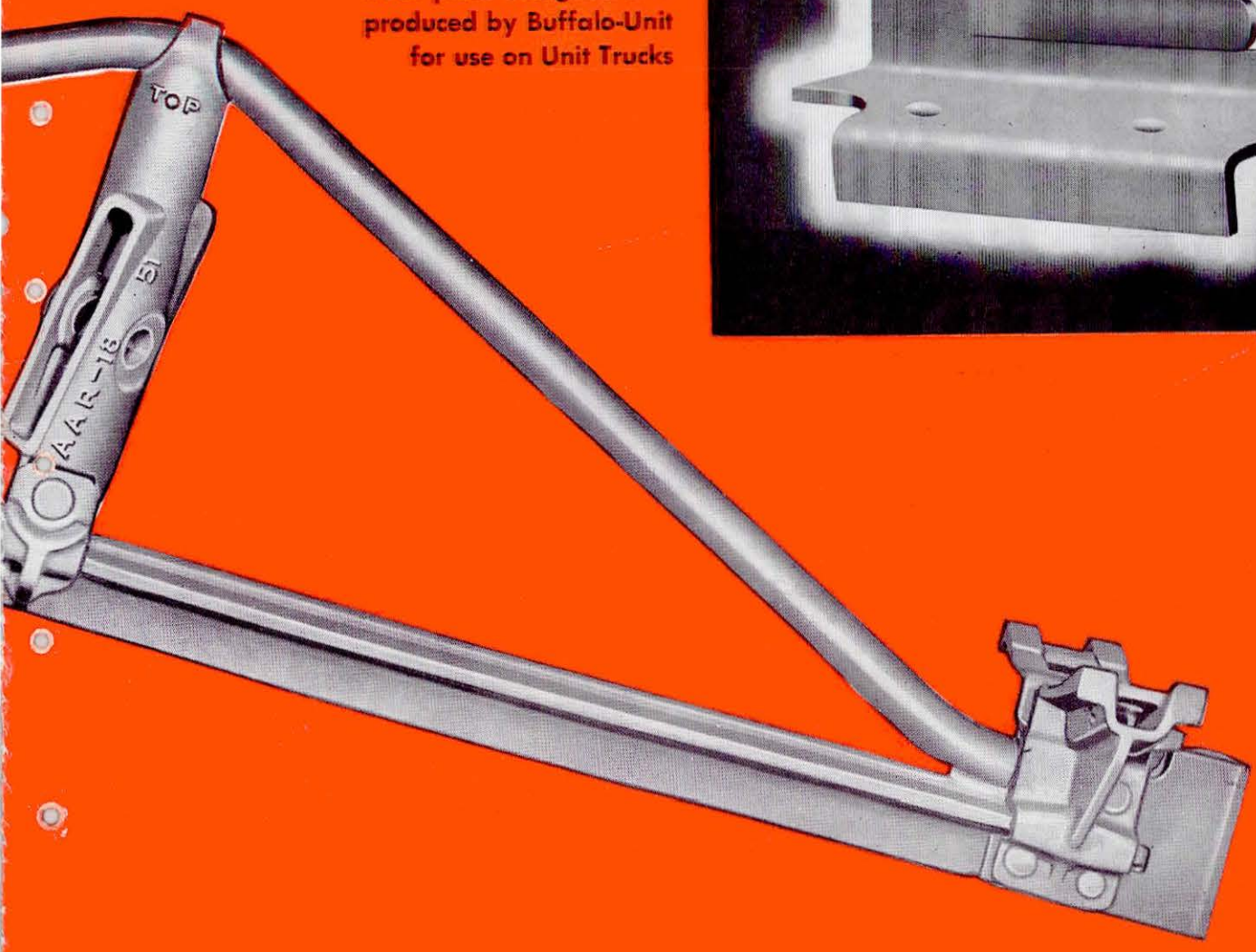

truck side frame. Thus the Buffalo Solid Truss Unit Brake Beam is held at the correct angle in relation with the center of the wheel, providing evenly distributed brake shoe wear.

It is simplicity itself and its popularity is attested by the application to 661,773 freight cars runnng in all parts of the United States, Canada and Mexico.

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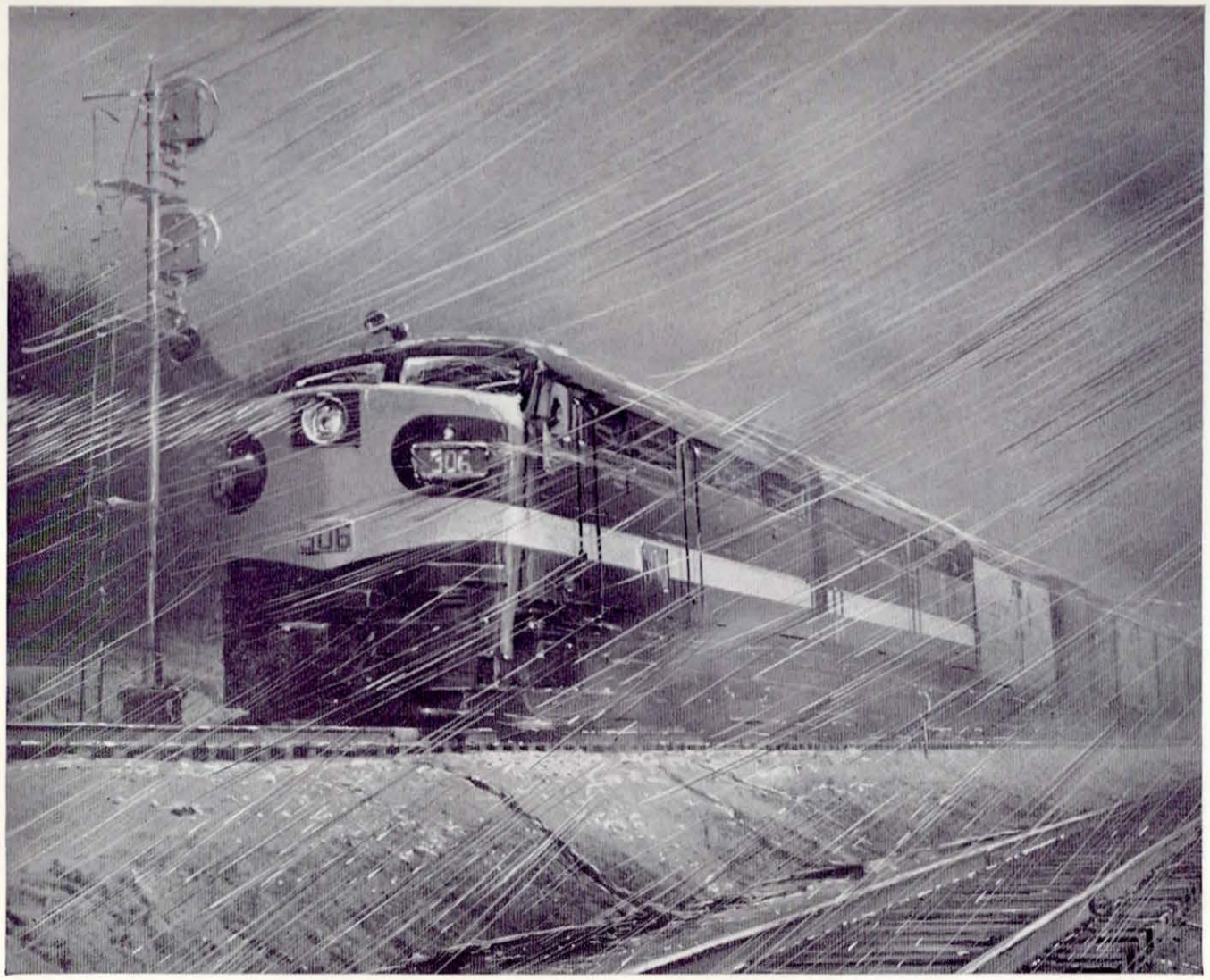

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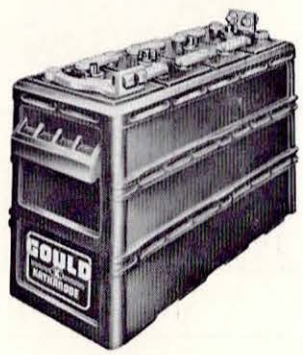

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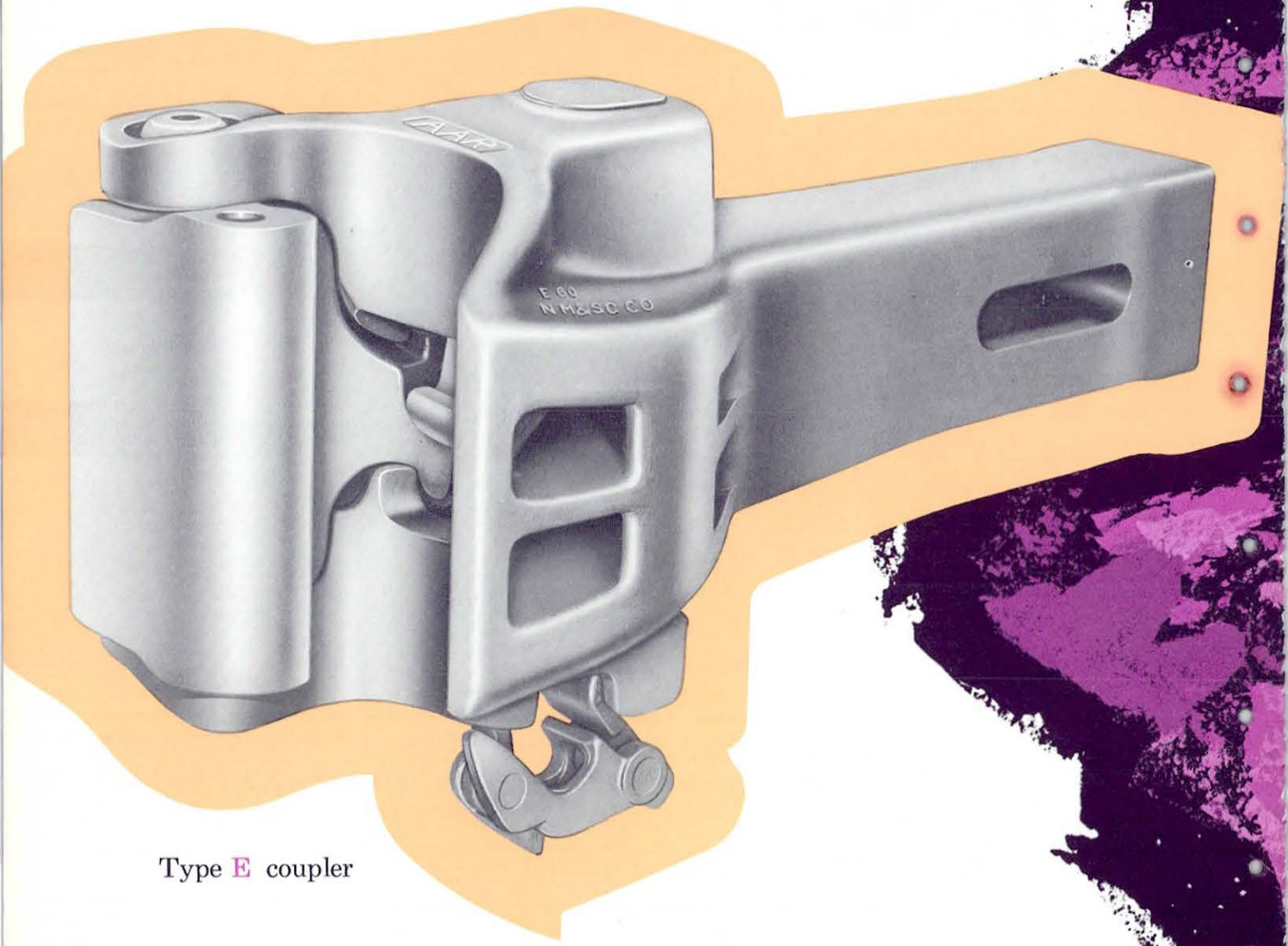
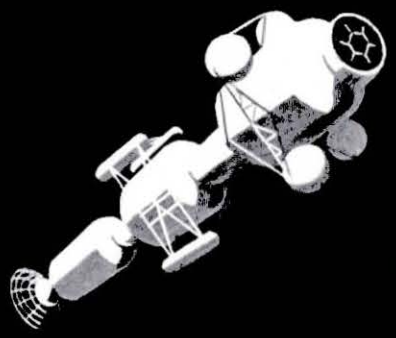


Type E coupler



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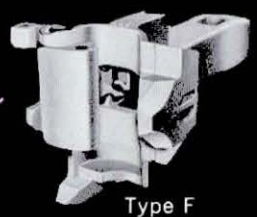
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NATIONAL SPEEDLOADER CONTAINER HANDLING SYSTEM

NATIONAL
PHOTO NEWS

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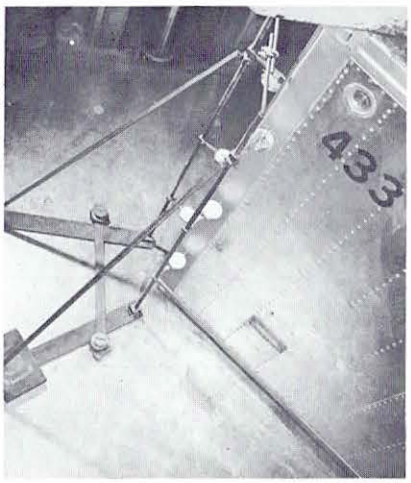
TESTS HAVE BEEN COMPLETED on National's Technical Center Impact Tracks of piggyback cars with trailers. Results are being studied to evaluate the cushioning requirements for this type of loaded car. Above photo shows instrumentation being checked between impact test.

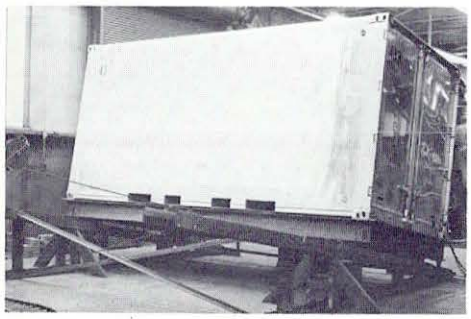


CORNER MEMBERS MUST SUPPORT UP TO 120 TON LOADS . . . dynamic testing of one corner of a 20 ton cargo container is shown here. The four container corners must be strong enough to support five or six fully loaded like containers. Tests were conducted at National's Technical Center in Cleveland.

20 TONS IN THREE MINUTES! . . . here the Grace Line's ship, S.S. Santa Eliana, loads or unloads 20 ton containers within a three-minute cycle per container. The National Speedloader System, incorporated in the gantry crane and the containers, makes possible the completely automatic handling of these giant containers and plays an important part in the speedy three minute cycle.

EASY TO HANDLE . . . EASY TO STORE . . . EASY TO INVENTORY . . . couplers at National's Melrose Park, Illinois, plant are being strapped and palletized for shipment to the railroads. Using expendable pallets this new method of shipping railroad parts eliminates many headaches of handling, storing and counting at railroad shops and yards.

A-1994A



CAN THEY TAKE IT? Here a 20 ton cargo container is undergoing a side-wall dynamic loading test. The container, fully loaded with bagged cinders, goes through rougher treatment than it will ever meet in service to determine its wall strength.

Transportation Products Division

NATIONAL
MALLEABLE AND STEEL
CASTINGS
COMPANY

Cleveland 6, Ohio

National Railroad Specialties . . . For Sure

What Are Big RR Questions?

Why Retainer Valves?

To the Question and Answer Editor:

I would like to submit two questions for discussion in your columns.

Why have retainer valves on any equipment any more? I have been in train service almost 20 years and have found no use for them during this time. Possibly they have been a hazard due to their being placed in an improper position by unauthorized persons. I feel the present modern braking power is adequate and has made the retainer valves obsolete and of no worthy use.

Why are box car hand brakes placed at their present height? They would be more effective, safer, and useful at the height they are placed on gondolas. It is true this brake is used for spotting cars at times. When this is necessary, the person riding the car for this purpose could do almost as well using a side view from the end of the car.

The two best selling features on this change would be: Safety for the man using this brake. He would not endanger himself by getting at this height and possibly losing his footing, causing a reportable injury. The other would be the savings to the railroads from a cost angle.

Certainly it would be cheaper to have this hand brake at the lower level, as it would require less materials and upkeep.—*Howard S. Waddell, road local chairman, Brotherhood of Railroad Trainmen.*

Roller Bearing Identification?

To the Question and Answer Editor:

I submit the following for consideration:

Ready identification of roller bearing cars is needed for those who flat-switch them. Many have distinctive journal caps and are stenciled. But when conventional journal boxes are converted for roller bearing use, or where visibility is poor, this feature is not readily identified. The result is the car is frequently rolled or shoved at too great a speed, causing damaging impacts.

Perhaps if the cut levers were painted or shaped in a different way, roller bearing cars would not be overlooked and would be handled properly.

Standardization throughout the industry is necessary.—*J. W. Lamberson, supervisor of safety, Atlantic Coast Line Railroad Company.*

A forum for railroaders who want to explore questions of importance to their industry, this column welcomes both questions and answers from readers at all levels of responsibility in the industry and associated fields. We'll pay $10 to any reader submitting a question that forms the basis for a column discussion. Address correspondence to Question and Answer Editor, Railway Age, 30 Church St., New York 7, N.Y.

[*Periodically in this space, we ask our readers to let us know what are the questions they are most interested in discussing. Would you like to see more theoretical questions, like that below on the advantages of a uniform system of numbering for piggyback equipment, or would you prefer specific questions like those recently that have dealt with railroad rules? How do you feel about quizzes, like the one on awards under the Railway Labor Act? Let us know your preference, so we can plan accordingly. Editor.*]

Why Not Uniform Piggyback Numbers?

To the Question and Answer Editor:

Regarding the question, "Why Not Uniform Piggyback Numbers" in your July 18 issue.

We agree wholeheartedly with Mr. Duncan's suggestion that a uniform numbering system should be used for many reasons, which are all too well-known to those in the piggyback field.

The Pennsylvania, we think, has taken a step in the right direction, and has assigned a new numbering system and has been using it for the past two years on new equipment.

In our system the first number indicates the type trailer, the second digit indicates the length and the remaining digits indicate the trailer number, e.g.:

Volume Van
↓
PRR 15145
↑
35-ft length

Insulated
↓
PRR 3519
↑
35-ft length
Flat Bed
↓
PRR 6527
↑
35-ft length
Refrigerated
↓
PRR 5530
↑
35-ft length
Volume Van
↓
PRR 10129
↑
40-ft length

We believe a system such as this would, among other things, enable the solicitation of business for trailers (in advance) in direction of home, reduce per diem, provide quick turnaround.

The PRR would be happy to support necessary action to obtain such uniformity.—*W. H. Mapp, manager Truc-Train Service, Pennsylvania Railroad.*

[*The question of a uniform numbering system for railroad equipment was raised in this space in our March 21 issue when M. J. Wilhelm, a B&O car distributor, suggested that a uniform numbering system for interchange equipment would improve and simplify car distribution. Subsequent discussion included a description of Great Northern's car code system (RA, May 9, p. 13) and a suggestion that piggyback equipment, at least, could be numbered uniformly now, while this phase of railroading is still in its infancy, without undue complications. One uniform system has been discussed (RA, Aug. 8, p. 11). Here's another. Editor*]

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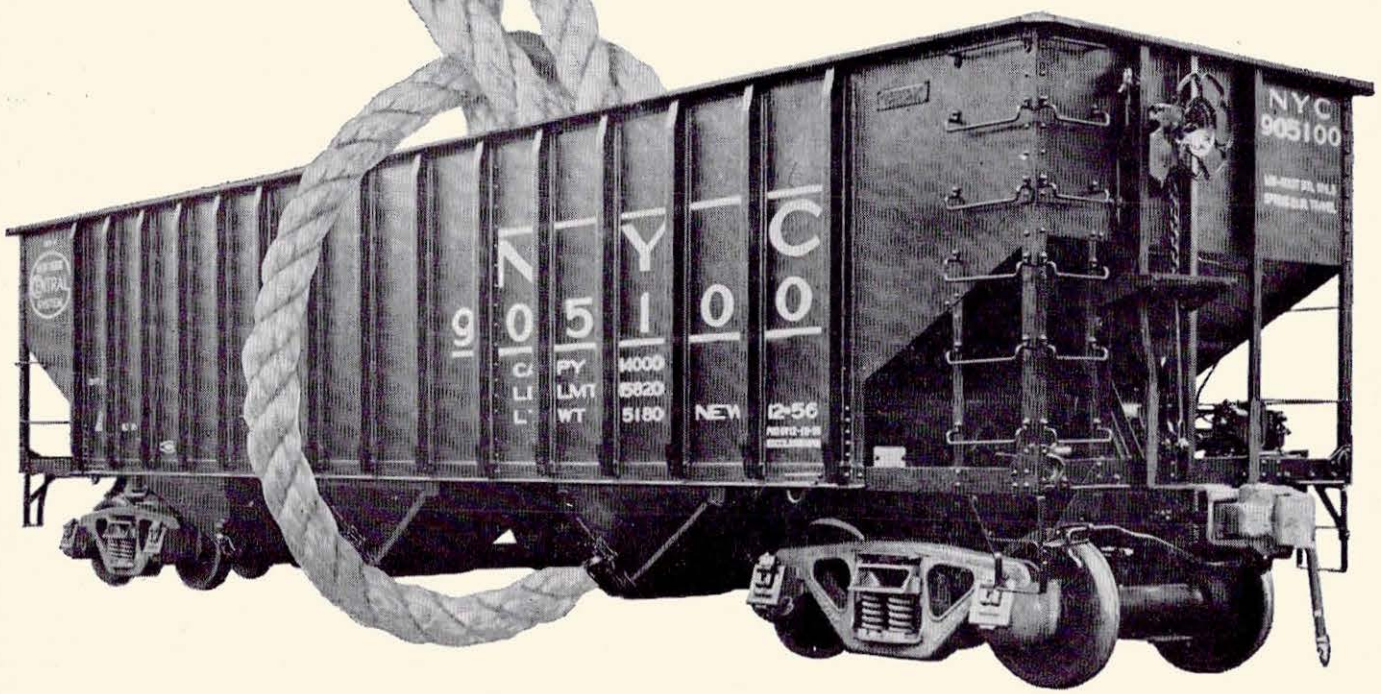
We are ordering materials for 500 rugged Greenville open top cars for early fourth quarter delivery. You can make important savings by tying on to this order.

Thousands of these cars are in service. They're thoroughly tested and proved. Minor modification can be made to suit the particular needs of your road.

Call us today regarding quantities, prices and deliveries. No set of prices is really complete until you've had a proposal from Greenville.



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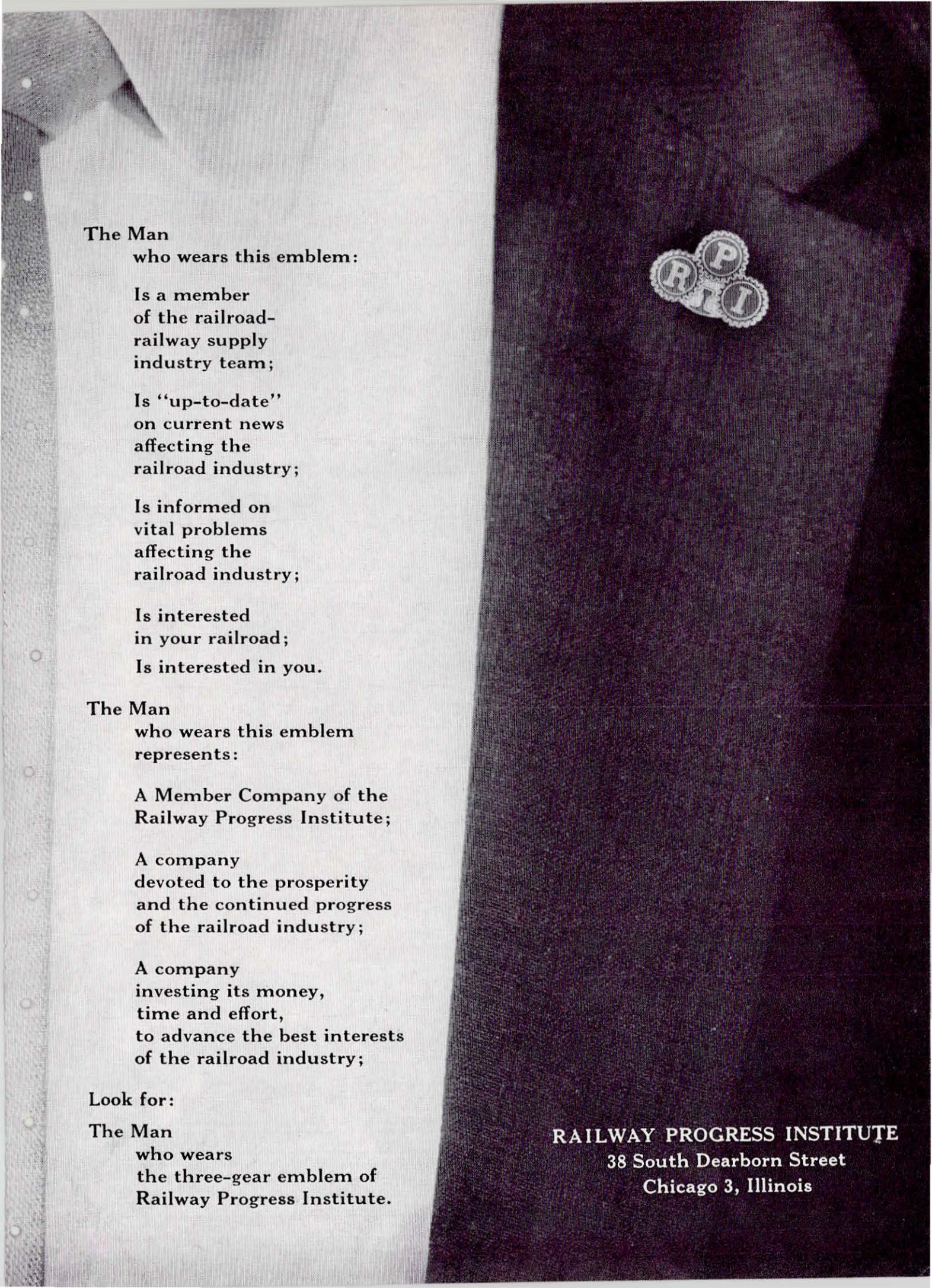

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Is informed on
vital problems
affecting the
railroad industry;

Is interested
in your railroad;

Is interested in you.

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A Member Company of the
Railway Progress Institute;

A company
devoted to the prosperity
and the continued progress
of the railroad industry;

A company
investing its money,
time and effort,
to advance the best interests
of the railroad industry;

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who wears
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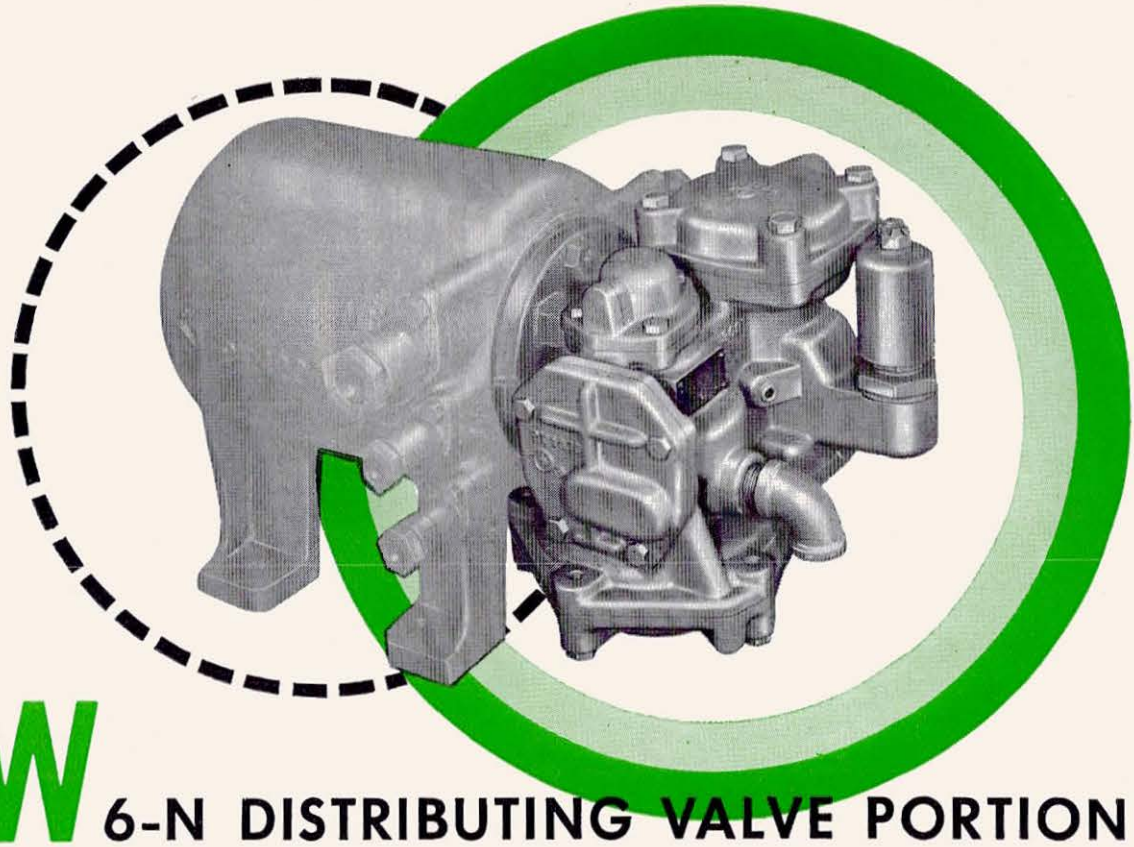

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Strikes Spread to Other Roads

► **The Story at a Glance: Strikes and threats of strikes made news last week. The nation's largest railroad went into its second week of complete shutdown, with several smaller carriers also closed by strikes. As transportation difficulties across the nation mounted, PRR offered to accept 23 of 27 contested issues to end its strike. Of the other four issues disputed between the railroad and striking TWU and System Federation employees, PRR said one—a jurisdictional matter—should be settled by the rival unions involved, while on the final three issues, the railroad offered to accept binding arbitration.**

TWU President Quill promptly rejected the PRR offer. Elsewhere, striking trainmen shut down the Grand Trunk Western, while other trainmen struck U.S. Steel roads at Pittsburgh, and a SUNA strike threat against 16 western roads was postponed again.

For the first time in its 114-year history, the Pennsylvania Railroad last week was shut down by a strike (RA, Sept. 5, p. 7). Operations ceased at midnight, Sept. 1, when a union walkout ended a three-year-old dispute between the railroad and some 20,000 members of the Transport Workers Union and System Federation 152 of the International Association of Machinists, Sheet Metal Workers Union and Blacksmiths Union.

Coming two days before the long Labor Day weekend, the strike made its first effects felt on Labor Day travelers—who normally use PRR passenger services extensively. The effect on shippers, who ordinarily route 118,000,000 ton-miles a day via PRR, was somewhat delayed by the long holiday weekend. By the first of the week, strong public pressure to end the strike was building.

Six governors and eleven mayors in PRR territory joined to urge "the earliest possible settlement of the strike and restoration of service" in a telegram to PRR Board Chairman James M. Symes, which cited "the serious economic impact and public inconvenience caused by the stoppage of the Pennsylvania Railroad."

In a telegraphed reply to the appeal of the governors and mayors, Mr. Symes said: "The National Mediation Board is still meeting with negotiating committees but little if any progress is now being made because of irresponsible and immovable attitude of unions on certain issues. Quill has publicly announced that he will not yield on any issues in the dispute, that the strike will not be settled over the weekend, but will be of long duration.

"Before the strike deadline, understanding had been reached by the negotiating committees on 23 of the 27 proposals made by the unions. One of the four remaining issues involves a jurisdictional claim by one of the striking unions to certain pipe work being performed by employees represented by a non-striking railroad union. We would prefer to dispose of all issues at one time and in one package. However, because of the hardships this strike is causing the public and our entire economy, which will multiply rapidly as time goes on, we would be willing, provided the strike is called off immediately, to sign up on the 23 issues tentatively agreed upon and to settle the remaining four issues by submitting three of them to final and binding arbitration under the provisions of the Railway Labor Act and by accepting in the jurisdictional dispute whatever the contesting unions work out among themselves.

"Inasmuch as Mr. Quill seems to be the public spokesman for the labor unions involved," Mr. Symes' telegram concluded, "a copy of this telegram is being sent to him."

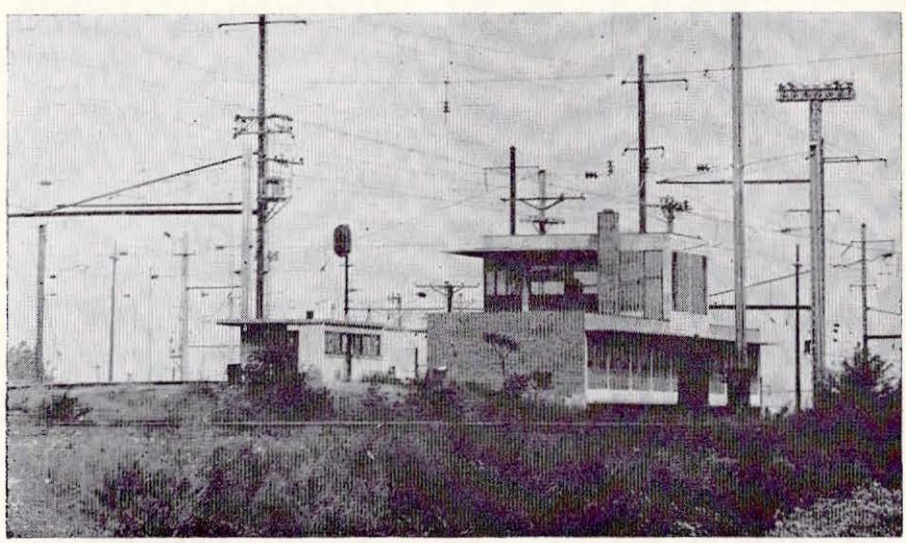
Union leaders met Tuesday with PRR officers in Philadelphia, and announced afterwards that they had rejected the PRR offer. As TWU President Michael J. Quill put it, "We have rejected arbitration. We are back with mediation." A union spokesman explained that the TWU did not consider work rules a proper subject for arbitration.

Mr. Quill later listed two reasons why his union would not accept the proposed arbitration. First Mr. Quill said the strike was "pre-judged" by Secretary of Labor Mitchell (who in a television broadcast Sept. 4 had described Mr. Quill as "unreasonable" in calling the strike, which, he said, ignored the "public interest") and second, Mr. Quill said that under the Railway Labor Act, work rules are "mediated and bargained out" rather than arbitrated.

As the week continued, Mr. Quill gave the railroad what he said were his "rock-bottom" proposals, and announced that if they were not accepted, he would break off negotiations by leaving town.

In a statement Thursday, PRR Chairman Symes noted: "Upon examination, the so-called 'rock-bottom' proposals made by the striking unions yesterday were found to be nothing more than proposals previously made by the union with slightly different language."

However, Mr. Symes stated that negotiations would continue through the mediator in an attempt to arrive at a satisfactory agreement. When questioned concerning Mr. Quill's threat to leave town if his "rock-bottom proposals were not accepted within 24 hours," Mr. Symes stated that Mr. Quill would have to decide that for himself on the



ALL QUIET ON THE PRR, as the nation's biggest railroad last week entered the second week of shut-down caused by the TWU strike. Normally bustling, Morrisville yard, like all other parts of the 10,000-mile system, had no wheels turning. With 20,000 members of the TWU and System Federation on strike and 52,000 other PRR employees furloughed, 136,000 daily passengers and 118 million ton-miles of freight sought other means of transportation.

basis of his own views of his public responsibility. "I repeat," Mr. Symes said, "that this dispute can be settled—and quickly—by sincere efforts to engage in genuine collective bargaining."

Although the strike began with 27 points at issue, all related to work rules and conditions, only two appeared to represent irreconcilable differences between the railroad and the unions.

These are, first: insistence by the unions on a "scope rule" that would define strict job classifications and prevent a worker being assigned to any job other than his specialty and, second, a union demand that PRR agree in union contracts on how much repair, maintenance and construction work would be let to outside firms.

The Pennsylvania, which has been adamant in resisting both points, says that the scope rule would boost railroad costs unnecessarily by employing unneeded workers. The second demand, PRR says, is an open invasion of "managerial rights" of the company to decide for itself when to sell or lease properties, draw up consolidation or coordination agreements with other roads, and even to rent or lease automotive equipment that would not be maintained by the transport workers.

All of the issues have been reviewed by two independent agencies, a Presidential fact-finding board and a neutral referee. The Pennsylvania agreed to accept their recommendations, but the unions rejected the findings in both cases.

How railroad strikes like the PRR walkout stimulate Congressional interest in compulsory arbitration was pointed up in speeches made during closing days of the recent session which adjourned Sept. 2. Speaking the day before the strike got under way, Senator Smathers, Democrat of Florida, who was principal Senate sponsor of the 1958 Transportation Act, said a shutdown of PRR "must not be allowed to happen."

Noting that Railway Labor Act procedures had run their course in the case, the senator went on to say that "in the public interest, both sides should be required to appear again before a neutral tribunal and be required to accept its decisions as neutral and binding." The senator then added:

"I suggest that the whole future of railroad service in this country may be at stake here. The purpose of the Transportation Act of 1958 was to get the railroad industry a fighting chance to regain its strength as a servant of the people, the economy, and of the national defense. The public and the national interest and safety must come first. An emergency of this serious nature would undoubtedly cause many members of Congress to urge consideration of compulsory arbitration binding on both labor and management for situations like this, where the country simply must come first."

Senator Javits, Republican of New York, endorsed what Senator Smathers said, adding, however: "Although he and I might conceivably vote in a different manner on a labor reform bill, I certainly join the senator in saying this is the kind of thing which invites drastic legislation."

Senator Keating, Republican of New York, addressed the Senate about the matter before Congress adjourned, and this week he suggested that the controversy be arbitrated on a nonbinding basis by a committee composed of "three eminent civic leaders." The Keating proposal was embodied in telegrams sent to Messrs. Greenough and Quill.

James B. Conant, president emeritus of Harvard University, Senator Aiken, Republican of Vermont, and Edwin Dale, "the distinguished New York Times economic correspondent," were suggested by Senator Keating for his proposed board.

Meanwhile negotiations for settling

(*Continued on page 66*)

The PRR Strike—an Editorial

Who's to blame for Mike Quill's strike against the Pennsylvania Railroad?

Certainly the railroad isn't at fault. It accepted the findings of a Presidential emergency board and a neutral referee, both judgments being rejected by Quill and company.

An invader into railway unionism, Quill has everything to gain competitively by impressing the rank and file with his toughness. The risk of inflicting mortal injury on the industry can mean little to him. He has numerous dues-paying members elsewhere than on the railroads. And government ownership doesn't scare him a bit—most of his members in transit service are local government employees already.

The point is that the likes of Mike Quill will go just as far as the law and public authorities will permit. So the ultimate responsibility for the Pennsylvania strike rests squarely on the people who make and enforce the rules—that is, on Congress and, to a lesser degree, on the executive branch of the government.

Railway labor earned an enviable reputation for responsibility and conservatism—but that was back in the days prior to the 1934 changes in the Railway Labor Act. In those days, there was some risk in striking and, as a consequence, strikes seldom occurred. But with railroads now forced to deal with unions, and with the union shop, a union hazards nothing by striking.

The theory behind the provision for presidential "emergency boards" was that their findings would be supported by official opinion and public opinion—and that moral pressure would force the recalcitrant party in a dispute to give way. And that's the way it worked until 1941—when President Roosevelt, instead of supporting a board's finding with the prestige of his office, meekly called upon its members to act as mediators, and to seek peace by cajoling the railroads into further concessions.

Since that time, the unions have seldom regarded an emergency board decision as binding upon them—and Presidents have seldom used the prestige of their office to support these boards. In the present instance, President Eisenhower has (up until Sept. 8 anyhow) made no statement in support of his fact-finding board in the PRR dispute. Labor Secretary Mitchell did so, tardily, several days after the strike had begun, only to have Quill denounce him as a liar.

Meantime, the strike is being financed by payments of unemployment insurance to the strikers—funds supplied entirely by taxation of the railroads.

The Railway Labor Act, as it now stands, is a perfectly useless piece of legislation for promoting industrial peace on the railroads. It doesn't promote peace—it foments strife. Either the Act will have to be drastically amended, to inject some element of risk to a union in striking, or it will have to be repealed and have compulsory arbitration substituted for it.

Strikes in a public-service industry are intolerable from the standpoint of the public interest. To yield in the face of Quill's intransigence will not reduce conflict, but make certain that there will be a lot more of it.

Since 1902..
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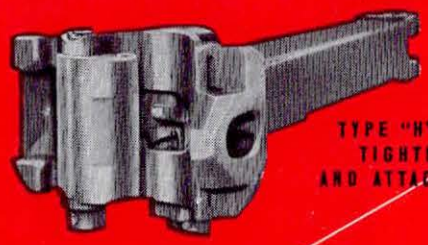

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TYPE "E" SWIVEL SHANK COUPLER & YOKE

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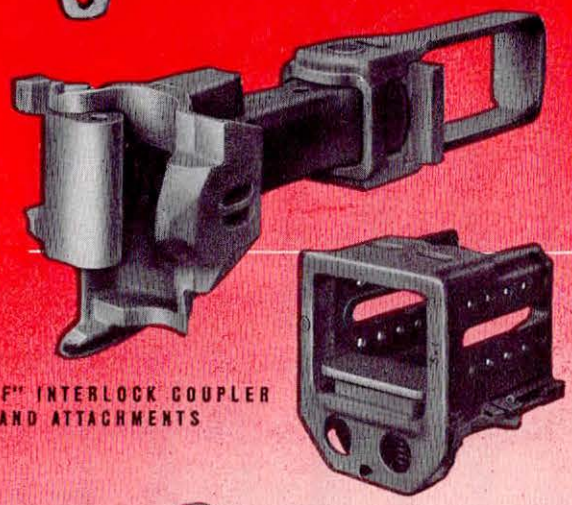
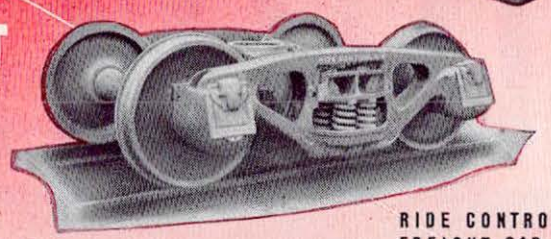
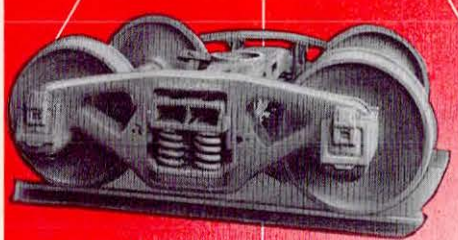


TYPE "F" INTERLOCK COUPLER AND ATTACHMENTS

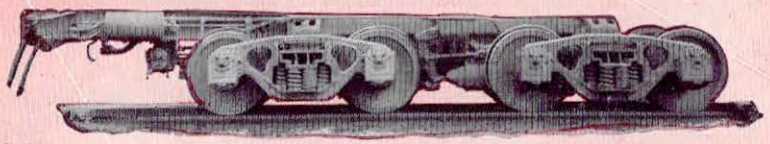
STEEL CASTINGS for RAILWAY EQUIPMENT



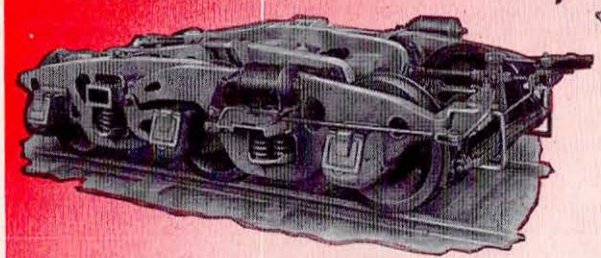
RIDE CONTROL (A-3) FREIGHT CAR TRUCK



BUCKEYE C-R (CUSHION-RIDE) FREIGHT CAR TRUCK



BUCKEYE EIGHT-WHEEL TRUCK



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3. Increasing competition

An immediate solution to some of the causes of depressed profits is available to railroad management: a diesel engine that cuts operating costs as much as 35%, lasts longer before obsolescence and delivers more gross ton-miles.

This is the ALCO 251 diesel. It is not a new engine in the sense of being just off the drawing board or assembly line. The claims we make for it are backed with proof gathered in 200 million miles of operation, over five years' service.

Compared to the other leading engine, the 251 has demonstrated fuel savings of 8 to 17% in comparable service. Lube-oil consumption has been as much as 40% less. Maintenance has been so much lower that several leading railroads have cut scheduled inspections in half.

The average result is cash savings of about $12,000 per engine per year, more than enough to justify a new-locomotive investment.

The 251's power also means added profit. Replacing units of less output, it can haul more tons faster. It is a modern design with vastly more power potential than other railroad engines. An ALCO 251 fleet will deliver years of added service before obsolescence.

You can apply the 251 engine in several ways. New locomotives are one choice, of course, and there are also various "reprofiting" and re-engining plans for older locomotives, at attractive capital savings.

We want to carry this fact to the management of every railroad: the ALCO 251 engine is the best solution to rising costs, aging equipment and increasing competition. Judged on quality, it stands far in front.

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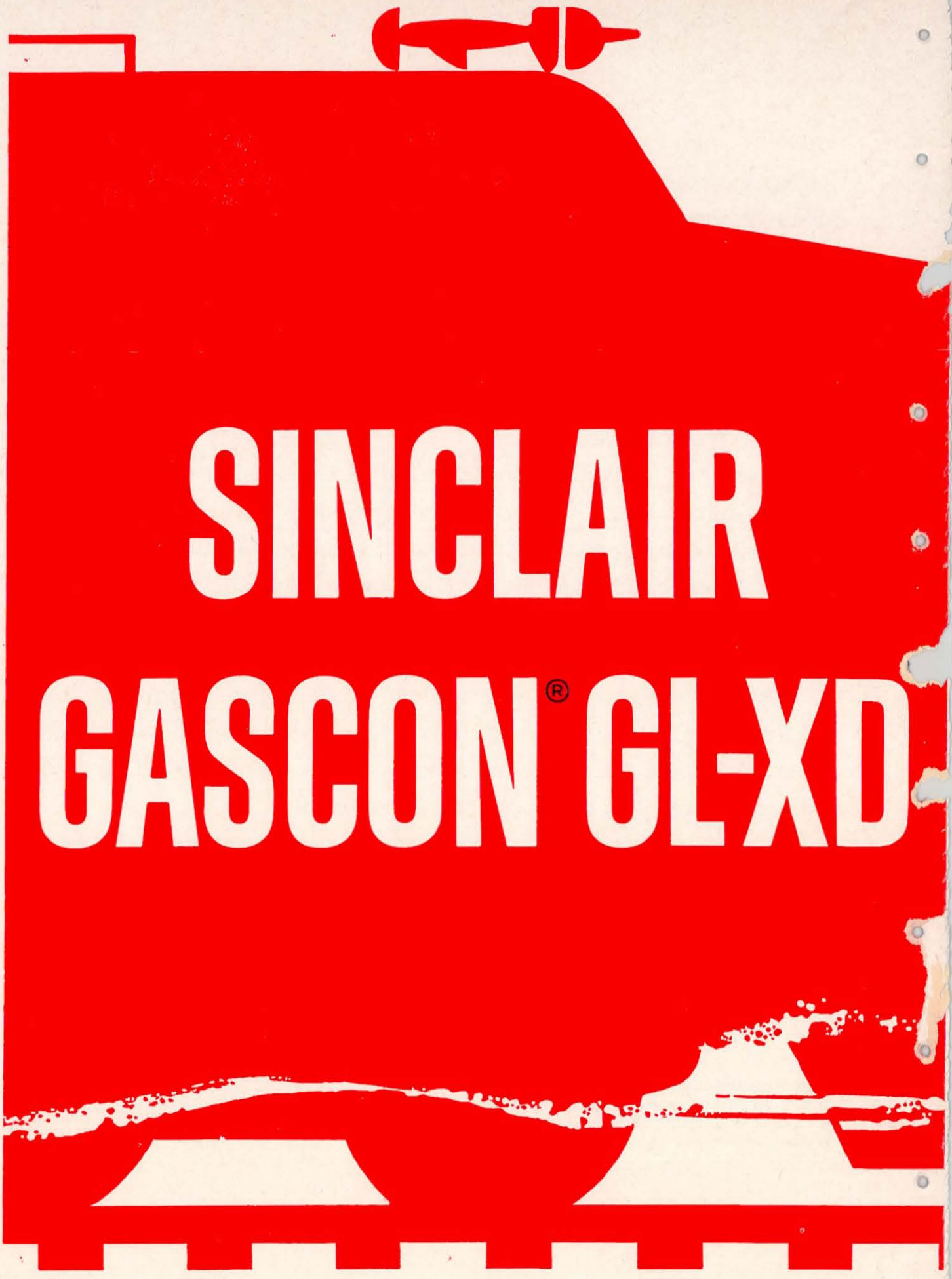
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How B&O Keeps Diesels Busy

► **The Story at a Glance: Central control bureau juggles motive power to obtain top utilization of diesels.**

Getting maximum work out of locomotives on large road requires knowledge of over-all system needs. Communications with key points keeps bureau informed of traffic to be moved, location and availability of all diesel units.

With this information, bureau balances power to fit traffic pattern, improves train performance, keeps down dead-head crew expense, frequently avoids need for helper locomotives.

A new 12-man team keeps the B&O diesel fleet busy. Known as the Bureau of Motive Power Operation, the group is achieving three objectives:

- Stepping up diesel utilization.
- Reducing operating expense.
- Improving train performance.

Located at the road's Baltimore headquarters, the bureau has full authority over the operation of all motive power. Complete dieselization is responsible for the break with tradition.

Inherent characteristics of steam power, designed for specific work, with its need for frequent attention, effectively prevented centralized control. When operating steam locomotives, the B&O, like most roads, had vested motive power assignment in the hands of divisional and regional officers. This local responsibility of locomotives was delegated to the general managers of three regions and superintendents of thirteen divisions.

Since early 1958, when the road became completely dieselized, the B&O studied various proposals for the central control of motive power. As a result, on Dec. 1, 1959, the new bureau was created to coordinate the motive power needs of the regions with requirements of the railroad as a whole.

The bureau's manager, C. M. Machin, is on the staff of W. C. Baker, vice president-operation and maintenance.

Keeping tab on 1,148 diesel units, operating over more than 6,000 miles of track, is a big job in itself. Yet the bureau must do more than keep tab on motive power; it must have the units at the right place at the right time to insure that traffic moves smoothly and on schedule.

Motive power gets unbalanced on a large system like the B&O. The problem would be simple if all inbound trains had an outbound counterpart requiring the same motive power. But if, as is usually the situation, 15 trains move daily from A to B and only 10 trains are required from B to A, each with three-unit locomotives, the result is a surplus of power of 15 units at B, a deficiency at A. This situation arises from loaded movement in one direction, empty returning; excess traffic in one direction, or variations in tonnage ratings. Surplus power could be moved deadhead, or light, from B to A, but the bureau tries to avoid this waste. Generally, the extra power is multiplied, or doubleheaded, in regular trains. This increase in headend power steps up train performance, minimizes deadhead crew expense, and often eliminates the need for helper locomotives.

The assignment requires a staff experienced in the B&O's systemwide operations. So the bureau is manned by men who know the business—trainmasters, chief dispatchers or general foremen-motive power. Operating on a seven-day week, the bureau keeps a minimum of two men on duty around the clock.

The key to the efficient functioning of the bureau is communications. It must know the location and availability of all diesel units and the traffic on

(*Continued on page 34*)

Master Control Sheet – B&O Diesels

DU – CUMBERLAND

CALL TIME: 12:20 AM, 5:15 AM, 6:00 AM, 9:00 AM, 11:20 AM, 2:05 PM, 5:15 PM, 8:00 PM, 10:45 PM

T	S	SCHEDULED TRAIN – IN	TIME IN	UNITS	DUE FORM	TRAIN DATA
3		S & D	410A	4039		
T		12 01 A	"	5017		
		cf 700P	"	4509	Pgh	
3		GR – X	325A	4494		
S		3 30 A	"	5444		
		cf 815P	"	6548	GR-25	
3		VI – 194	530A	4025		
I		6 15 A	"	5014		
		cf 1130P	"	5020		
				4022		
2		ADV-CSD97	1100A	4555		
T		6 30 A	"	5505	DU-26	
		cf 330A	"	4559	DU-26	

T	S	SCHEDULED TRAIN – OUT	CALL TIME	UNITS	DUE FORM	TRAIN DATA
		CSD 98		None!		
		12 01 A				
		23	1215A	4530	GR-24	
		1 15 A		5408		
1		VI – Local		None!		
		MWF. 8A				
2		BK – Local	630A	4507	Pgh	
1		8 A		4598		
3		1 – TSW	840A	4002		78c
T		10 A		4002		
				5041		
				4c		

UNITS ON HAND	DUE FORM	REMARKS (TIME ON HAND)
4011		605P
5009		"
4530	GR-24	600P
5500		"

4		I – TSW	830A	4017		
I		8 A		5490	DU-25	
		cf 5.0A		5472		
				6479	Pgh	
3		2 – TSW	10.5A	4615		
I		8 30 A	"	5502		
		cf 515A	"	5480		
3		VI – CG 92	900A	4502	DU-23	
		8 30 A	"	5435	MK-26	
		cf 455A	"	6489	Pgh	
				4601		
4		GR – 88	1035A	4541		

		I – BK 94	430A	4008		
T		10 30 A		5483		
				4558		
3		CSD 94	1240A	4015		
T		11 A		5508		
				5480		
		11	1030A	4508	DU-23	
		11 25 A		5498	DU-25	
3		2 – BK 94	210P	4559	DU-26	
		12 30 P		5505	DU-26	
				4535		

YARD SERVICE		
4419	DU-25	
4413		
6421		

SHOP SITUATION

UNITS SHOPPED	FOR	IN SHOP TIME	IN SHOP DATE	OS FIG	OK SERV
5519	HR	900P	14	-	
6443	HR	1201A	16	"	
6414	Radio	700P	15	"	
4020	RR	400P	28	1201P	330P
4090	E	600P	12	1100A	-

3		VI – ESS	1210A	6404	Test Units
		4 45 P	"	6405	
		cf 450P			
3		VI – TSE	630P	4547	
I		515 P	"	5460	
		cf 220P	"	4559	
3		VI – 96	850P	4005	
I		5 30 P	"	4008	
		cf 350P	"	4015	
			"	4029	

				4508	
				4598	
3		STK – BK	850P	4005	
I		7 40 P		4029	
2		I – CSD96	710P	4017	
		7 45 P		5014	
		PH +			
3		NY – TSE	940P	4593	
		8 P		5500	
				4558	

UNITS SCHEDULED FORM

UNIT	DATE	LOCATION		
4562	23	RX	DU	BK
5509	23	OD	NC	
4560	23	OD		
5402	24	BW	OD	
4540	25	RI	YI	
4549	25	GR	C	
5490	25	DI	DU	
6419	25	DU		
4545	25	HA	DU	
7003	25	KY	FA	
6011	25	D"	GR	

EXTRAS		
GR-X	1230A	4580
515P	"	5493
	"	4005
HA-X	1245A	4007
1000P	"	5458
	"	5479
LV-Lite	1050A	4480
1005P	"	5433
	"	5479
	"	4549

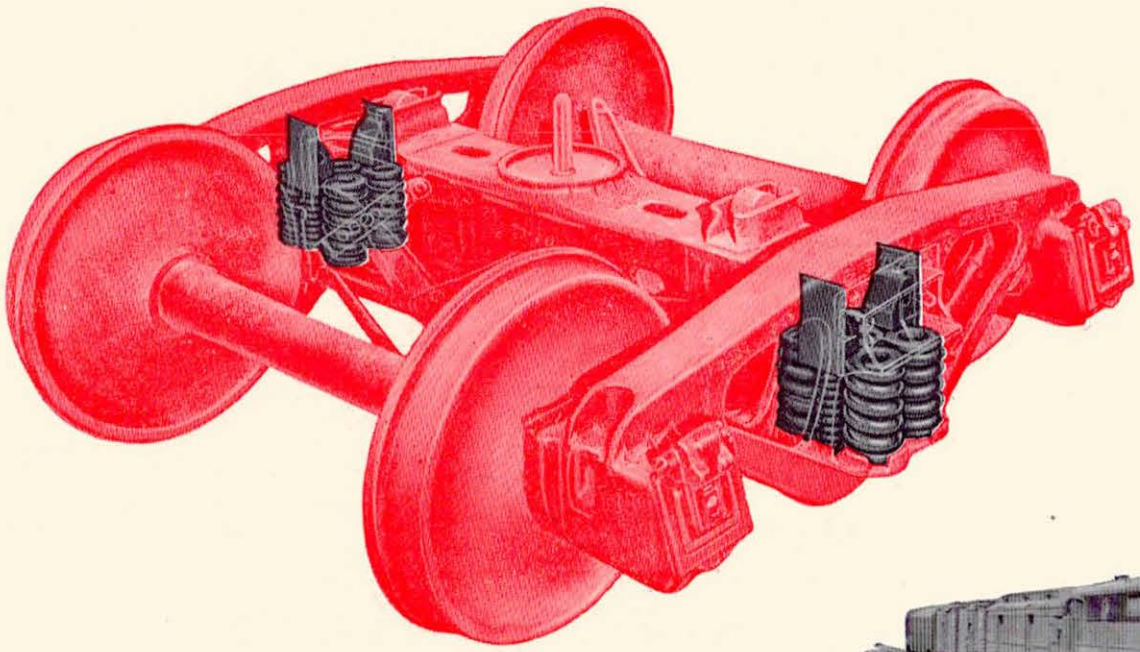
EXTRAS		
GR-X	120A	4007
		5458
		5479
Bananas	150A	4005
		6433
CV-BK-X	330A	4011
		5008
CG	320A	4034
		4012

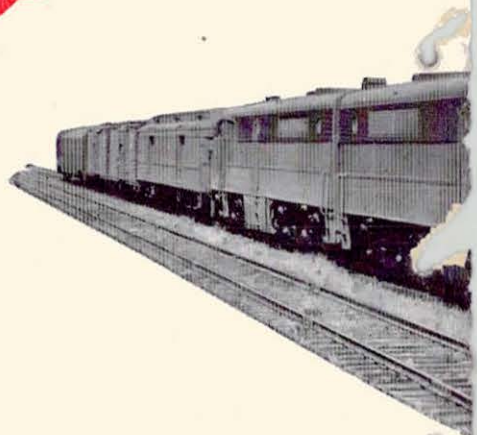
TERMINAL SITUATION

1201A –

BK 96	– 3	– C/1100
Smokey	– 3	– C/1200
Bane	– 2	– C/1500
CG	– 2	– C/320A
CR	– 2	– C/440A
Smoke		

BARBER *Stabilized Trucks*





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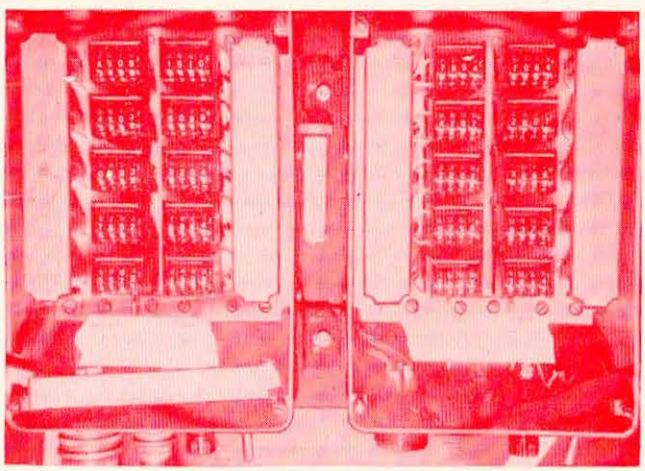

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hand and in sight at all points. This information is obtained by direct telephone communication. At specified times throughout the day the bureau is in touch with superintendents, chief train dispatchers, yardmasters and engine-house personnel over the entire system.

How this information is used can best be explained by describing the master power sheet on which the data is recorded. A section of one of these sheets is shown on page 31. This section shows the motive power operations for the Cumberland, Md., terminal (code designation—DU) for Thursday, August 25, 1960. Call times at the top of page indicate the hours at which the bureau was in telephone contact with Cumberland supervision.

The six columns at the left side of this sample form are used to record the inbound power on scheduled and extra trains. The information in the first column headed "TIS" indicates the following servicing or maintenance operations can or should be done:

T—Units can be operated through the terminal, or can be turned, without servicing.

I—Inspection and service required.

S—Service only required which means refuel and fill sand boxes.

This information can be ascertained from the handling at the preceding terminal. The numbers shown in the column record the average number of units required for the trains specified. This is for advance planning.

The second column indicates the train designation, underneath which is shown time the train is due to arrive within the yard limits. Below this figure is shown the time the crew was called "CF-Called For" at the preceding terminal.

The third column indicates the engineer's relieving time, or the time the locomotive arrives on the inspection pit. The fourth column gives the diesel units by number in the order they stand on the train designated.

The fifth column indicates if the power is scheduled for maintenance; and if so, the date and place it is to be performed. Units that are away from their normal tour of assignment are also indicated by designation of the points to which they should be returned.

The sixth column headed "Train Data" is used to record details of cars and tonnage of trains, and is used on a spot-check basis. Its primary purpose is to determine if the trains are overpowered or underpowered.

The second group of six columns covers the outbound trains operated from the terminal.

How Power Is Assigned

The first column is identical in nature to the first of the preceding group. The second column indicates the Train Designation, with the time due to leave the yard underneath.

The third column indicates actual call time of the outbound crew, which generally determines the time the power must be available for use. The fourth column lists the diesel units by number, in actual order, on the train to be dispatched.

The fifth and sixth columns are identical to those of the preceding group, except the information is applicable to outbound operation.

The next three columns at the top of the sheet, "Units on Hand," "Due Form," and "Remarks" indicate the diesel units that are available for use at midnight, which is the transfer time for this sheet for the next day's business. "Remarks" column generally indicates the time this power was made available the preceding day.

The three columns under "Yard Service" are used to maintain a record of road power assigned to yard work within the terminal.

Underneath the foregoing is "Shop Situation." A detailed record is kept of all units undergoing maintenance in the roundhouse in this terminal. The first line under the first column under "Shop Situation" gives the unit number undergoing maintenance. The second column indicates the general type of maintenance being performed. The balance of the columns show details of time and date that the unit is out of service and the estimated and actual time the unit will be available for service.

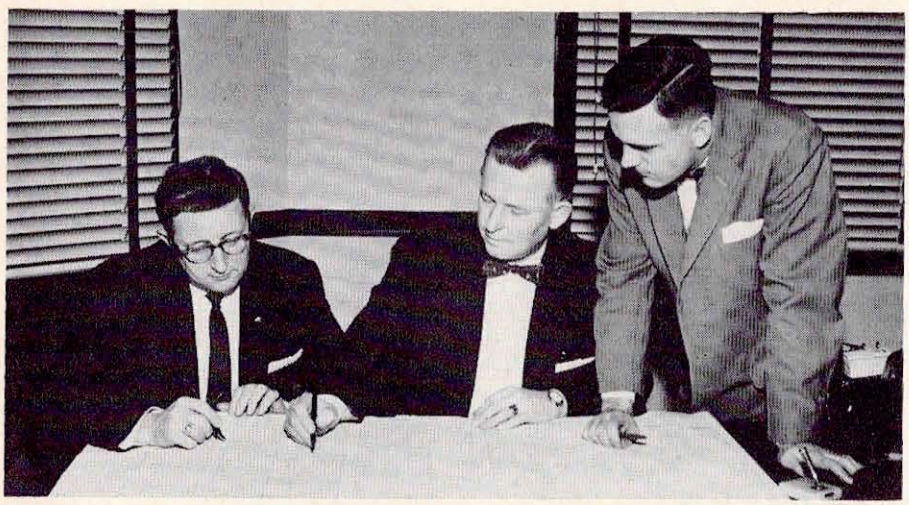
Underneath this group is also shown "Units Scheduled Form." The numbers of the units that are scheduled for maintenance within the next 72 hours are shown in this group. The date due for form and the actual location of the unit is entered in these columns. From this information, every effort is made to see that the units are assigned to the proper train to bring them to the home terminal on the date shown.

Underneath this group is shown "Terminal Situation." Several times throughout the day conferences are held with local supervision as to the number and character of extra trains, as well as scheduled trains, that are to be run in the foreseeable future. The approximate times that these trains are to be called, as well as their destination, and number of units required, are also indicated.

The information for the above is obtained from terminal supervision; and, as a general rule, is called into the bureau by telephone at specified periods throughout the day on a schedule.

Periodically during the day, a telephone conference is held with top divisional supervision; and the units on hand, in sight, out of shop, and those going into shop are correlated; and available power is determined at specific times to cover a period as far in advance as practicable. This information is compared with the unit requirements indicated under the terminal situation group. If a shortage of power is indicated, plans are immediately made to have additional power forwarded to this terminal. If a surplus of power is

(Continued on page 38)



DAY'S PLAN for motive power utilization is checked by manager C. M. Machin (center) and supervisors R. W. Boyd (left) and J. C. Deardorff.

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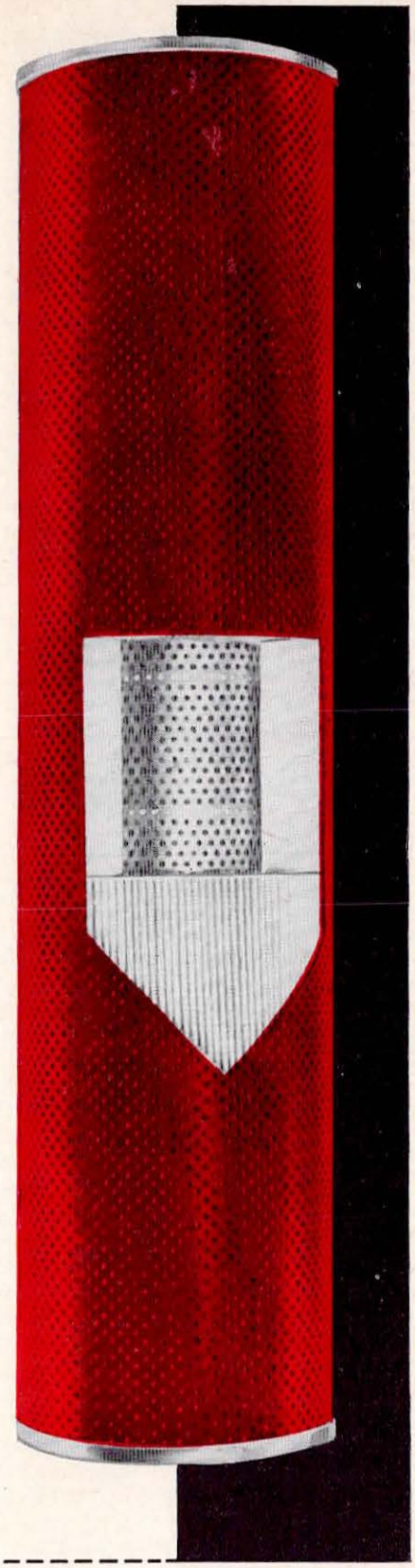

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6. Rinse Basket in clean water or with steam hose
7. Dry Basket
8. Install New Cartridge in cleaned Basket
9. Transport from Cleaning Room to Locomotive
10. Install Basket in Filter
11. Close Filter Case

THE WIX WAY

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2. Remove Used Filter
3. Install New Cartridge
4. Close Filter Case

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HOW B&O KEEPS DIESELS BUSY (*Continued from page 34*)

indicated, plans are made to move this power to areas that can use it to an advantage. If the units are not required elsewhere, instructions are issued to shut them down.

The bureau is still striving to obtain the optimum out of the B&O's motive power. Much remains to be done. A revision of train schedules will help. As an example, if a train is scheduled to arrive at A at 10:00 a.m., and a train is scheduled from A at 9:30 a.m., it is obvious that the same motive power can not be used to haul the outbound train. If the train can be scheduled out of A an hour or two later, or the inbound train can arrive an hour or two earlier, the same power can be utilized. The adjustment in schedules would improve diesel utilization, save a locomotive for another assignment. However, service, connections, per diem, etc., must be given consideration in schedule adjustments.

The foregoing deals primarily with utilization of road freight diesel units. A separate arrangement is used to control the assignment and utilization of the B&O's 63 passenger units. Because passenger trains are on fixed schedules, passenger power generally operates on a preset pattern, which is adjusted to conform to maintenance requirements. Daily conferences are held with regional supervision to check performance and assignment of this power.

The bureau is furnished a report from every yard on the system covering the yard switching units actually used on the two peak traffic days of each week. The units in service and in shop are compared with units available. If a surplus is indicated, arrangements are made for transfer of the units, or they are removed from service.

The central control has been set up because only one office can have a clear picture of a system's need for motive power.

The performance of this bureau on the B&O is proving that a central and positive control of power increases diesel utilization, reduces operating expense and improves train performance.

Railroading After Hours with Jim Lyne

L. MUMFORD SPEAKS UP—The "New Yorker" magazine—best known, perhaps, as a sophisticated compendium of entertaining trivia—seems to be carving out a niche for itself as an advocate of railroad passenger service, from the customer's viewpoint. Not long ago it published a strong plea, by writer E. B. White, for continued railroad passenger service in Maine—which railroads in that area are rapidly abandoning, for compelling economic reasons. Now, in its September 3 issue, in an article by Lewis Mumford, it politely scolds the New York Central for alleged defeatism in retreating from the passenger business.

The piece is relatively gentle in its criticism of railroads, but it really lets go with both barrels in its indictment of the nation's idiotic and anti-railroad transportation policy. Lewis Mumford is one of the nation's outstanding authorities on urban and area development, and he opens up on the highway promoters with devasting candor. I believe you'd enjoy reading his article (I certainly did).

MODERATING REGULATION—It isn't always necessary to repeal laws, to keep them from doing damage after their usefulness is past. They may be observed as a kind of harmless historic ritual. I've often thought that some of the outdated parts of the Interstate Commerce Act (Section 4, for instance) might be appropriately so treated.

The other day, for example, I was reading a piece in the paper about the mace that hangs on the wall behind the speaker of the House of Representatives, whenever the house is in formal session; and is the symbol of the house's authority. In Britain they display an even more elaborate mace in a more conspicuous position in the House of Commons; and a session was broken up a few years ago when a couple of irresponsible members grabbed the mace and ran out with it.

The mace (a conventional representation of a medieval war club) is no longer used to hit people over the head with, but it is a pleasant and harmless reminder to legislators of the antiquity of their power and prerogatives. Some clauses of the Interstate Commerce Act might, with profit to the nation, be similarly accorded formal obeisance, while no longer being used as a club for chastising carriers actually innocent of evil conduct.

'COMMODITIES CLAUSE'—The railroads are the only industry in the country that is prohibited by law from "diversifying"—that is, getting into other businesses; and it's the so-called "commodities clause" which has been a law since 1908 that keeps them out. Oil companies, steel producers, chemical concerns—all of them can and do engage in transportation, but the railroads can't go into the oil, steel or chemical business. Several years ago, as I recall, the Transportation Association of America came pretty close to getting agreement by most of its "panels" that this clause should be repealed, but since then the subject has been quiescent. Why?

"Diversification" is either a sound course for business to follow or it isn't. If it is sound, then what reason is there for forbidding railroads to go in for it? If it is unsound, then why let other businesses do it?

TRUTH ABOUT THE DITCH—The whole of Great Lakes navigation facilities for ocean shipping (and not just the St. Lawrence River part of it) should be made self-sustaining by tolls. Such was the contention of Dr. Burton Behling, AAR's economist, at a transportation conference at Syracuse University not long ago (and a report of which I've just received).

Dr. Behling suggests that the Seaway Development Corporation might have its responsibilities extended to embrace the costs of the whole undertaking.

Southworth Lancaster of Boston has made the same point in a letter published in the Boston Herald. There's a lot of "self-liquidating" camouflage being talked about this colossal boondoggle—but, of course, the costs being assigned to toll collection are a mere fraction of the total.

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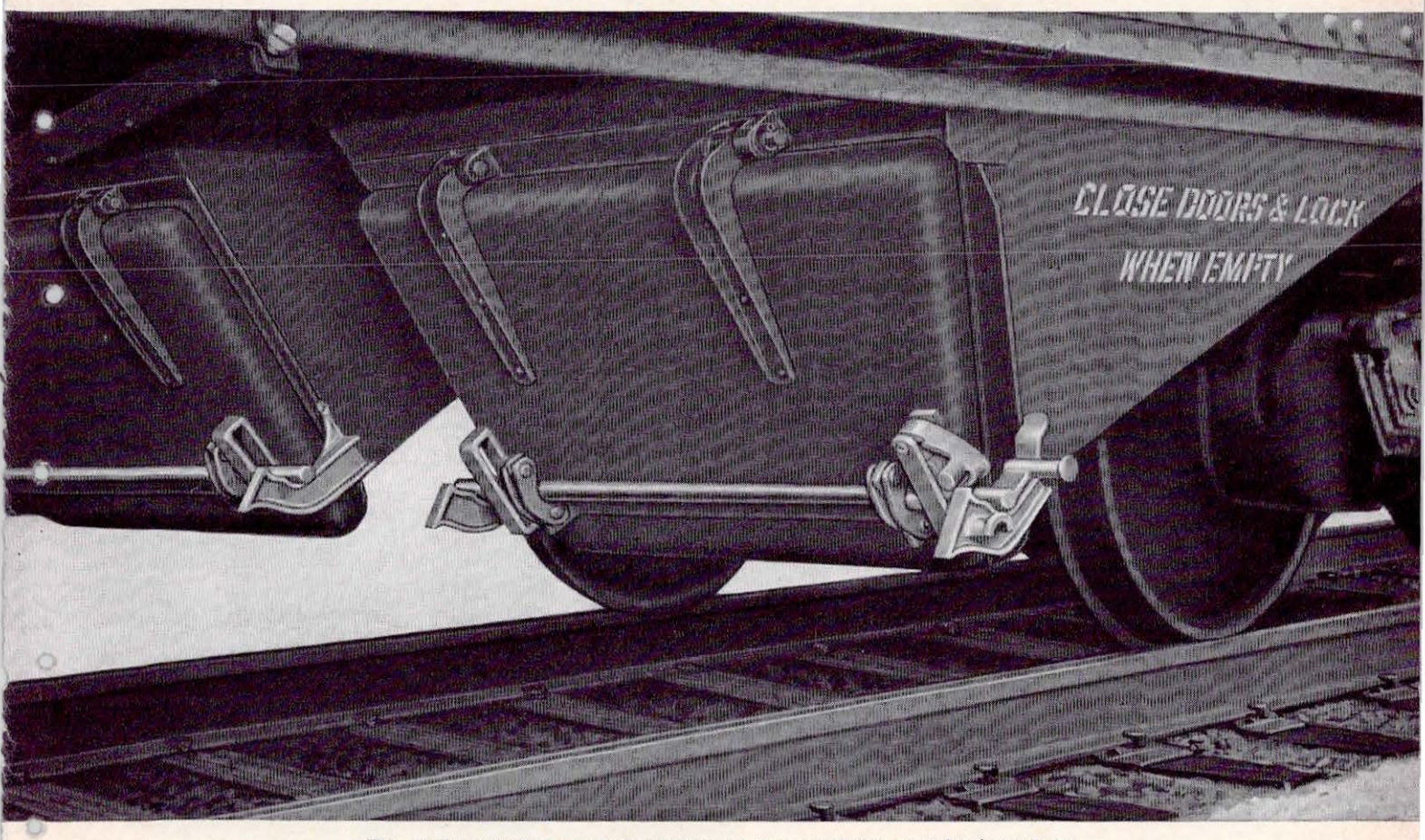

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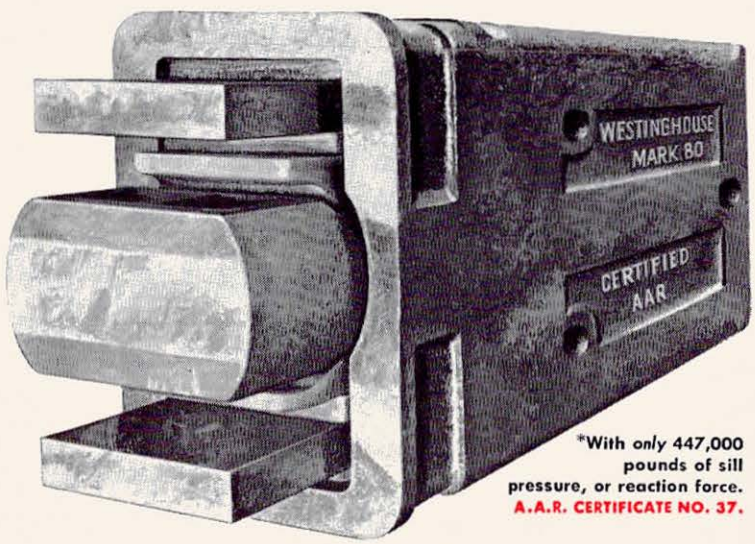

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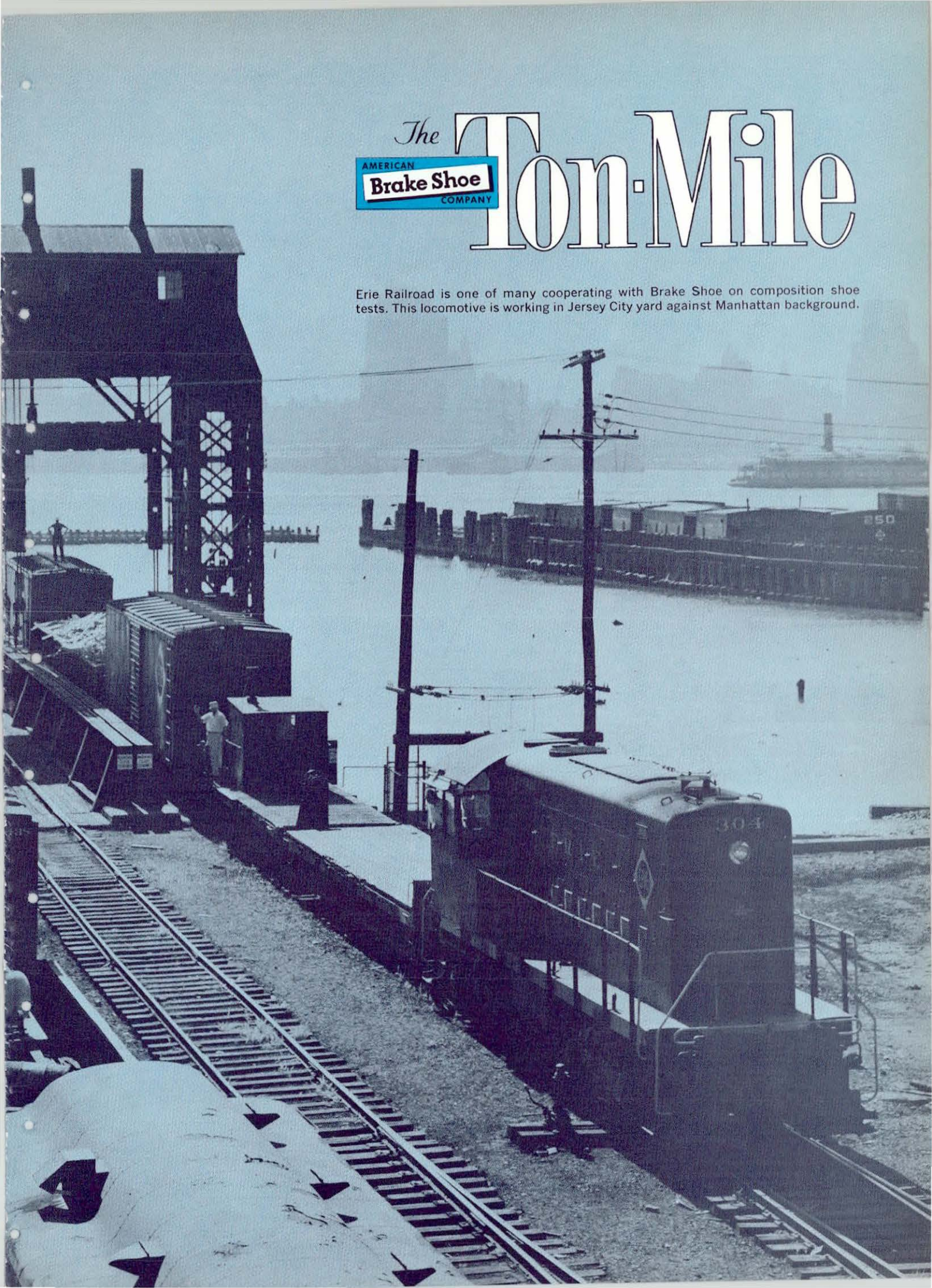
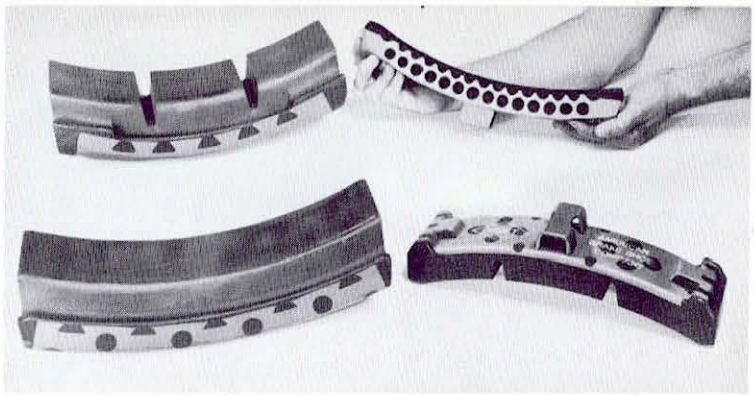
AMERICAN Brake Shoe COMPANY

Ton-Mile



Erie Railroad is one of many cooperating with Brake Shoe on composition shoe tests. This locomotive is working in Jersey City yard against Manhattan background.

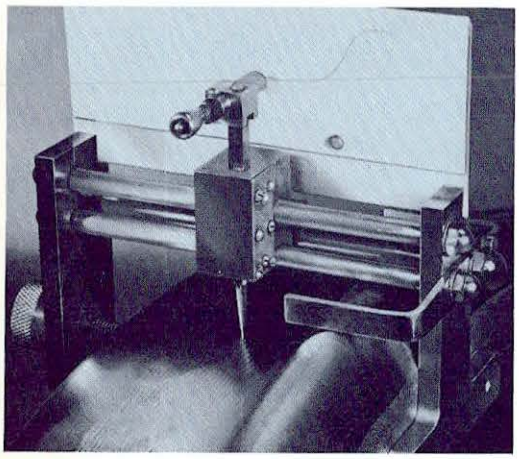


Evolution in composition shoes. Pair of diesel flanged shoes on left shows development of this type over last two years. Model of our 1924 vintage car shoe is compared with modern car shoe on right.

A progress report from American Brake Shoe...

Composition Shoes on the

According to laboratory and road tests, our Comet brake shoes outperform other composition types. Do they measure up to the standard shoe? Improving them is still our top priority research project.



To measure wheel wear accurately, Brake Shoe devised this special instrument. A stylus follows the wheel contour from the edge of the tread to the back of the flange; a pen traces this contour on transparent plastic, from which prints can be reproduced.

Road

Step (in your imagination) into our railroad research laboratory in Mahwah, New Jersey. Watch the massive dynamometer torture a pair of brake shoes as they bring a heavily loaded whirling wheel to a simulated emergency stop. Follow the recording pens as they trace automatic charts of these shoes' performance—not once or twice, but over and over again . . . to destruction.

These are composition brake shoes on test. What you're watching is a typical run this month. It was a typical run last month, too. And last year. And for years before that.

Why such prolonged testing of composition shoes? Two reasons.

First, composition shoe technology is far from perfected. We constantly create, test, and evaluate new formulations, new molding cycles, new designs, new manufacturing methods.

Second, the search for a truly satisfactory composition shoe is still going on. Of the thousands upon thousands of shoes we have tested, only a few are even passable. And when all factors are considered—dependability, cost, durability, wheel wear—not one measures up to certain standards which experience has shown necessary.

For a truly satisfactory composition shoe to be developed, it appears that a major technical breakthrough will be needed. Therefore, research activities to achieve this goal constitute our top priority project. Meanwhile, with composition shoes in their present state, our recommendations must of necessity be tempered by considerable caution.

Where We Stand

Briefly, our basic problem with regard to the composition shoe is one of trying to sit in impartial judgment on the relative merits of our own competitive products. We have made metal brake shoes for 58 years. Since 1924—yes, as far back as 36 years ago—we have sought the development of a successful composition wholly suitable for railroad equipment. As a matter of fact, these early researches into composition brake shoes led to the formation of our American Brakeblok Division—now one of the leading suppliers of high-performance brake linings for automobiles, trucks, buses and aircraft. The stores of data and information amassed through the years by American Brakeblok testing and research have proven of exceptional value in expediting our present composition railway brake shoe development program.

The composition brake shoe we make today equals and in some respects surpasses any competitive type. We know our design is superior. We know our steel back reinforcement is superior. We have always welcomed comparative tests.

Because composition shoes are often considered a sign of progress in a conservative industry, our reluctance to endorse them is regarded by some as a reactionary attitude. This reluctance is ascribed to the fact that we have several metal brake shoe plants that might be affected if composition shoes became acceptable standards. We are accused of being fence straddlers and of obstructing progress. We have been flattered by the comment that, had we advocated composition shoes ten years ago, railroads today would be equipped 100%. Why are we in American Brake Shoe "dragging our feet"?

Our policy is simply this: *to supply railroads with the very best brake shoes we can produce.* We are convinced that the metal shoe, as of today, is far and away the better buy for most situations. Our research efforts may in time result in a standard, all-around composition shoe of superior characteristics. Or it might well develop, as with automotive friction materials, that a series of compositions tailored for various types of equipment or special service requirements would be the most satisfactory solution. In any case, we aim to continue to be a major supplier of brake shoes for railroad equipment.

This is just plain common sense. If a competitor of ours should develop a brake shoe better than the standard metal one—whether of composition, sintered metal, or some other material—our position, as a supplier of metal shoes exclusively, would be untenable. No matter how good our metal shoes were, we would be forced out of business if competitive shoes were demonstrably better.

How can we avoid this? By developing the better shoe ourselves! Thus we not only maintain our long term brake shoe business, but also continue our leadership in the field. Certainly it is no mystery to us that such leadership must be deserved, and it is an obligation of this leadership to be completely objective in the consideration of composition shoes.

As you can see, from the standpoint of our own self-interest, the charge of "dragging our feet" is ridiculous. It is true that we have not as yet given unqualified endorsement to the composition shoe. Why not? Because, in our opinion, composition shoes in their present state of development do not warrant it. As manufacturers of both types of shoe, we are in a unique position to know the advantages and disadvantages of each. Here are our basic reasons for reserving approval of today's composition shoes:

Some Bare Facts

Consider relative *safety*. While it is true that under many conditions of service composition can provide necessary retardation and stopping power, the winter of 1959-1960 has shown that effective braking can be seriously compromised by icing of the brake shoe face. For the first time, during last winter, this icing problem was frequently recognized as an unexpected and certainly an undesirable characteristic of compositions. True, ice will form on shoes of any material, but long experience has shown metal shoes' recovery from this condition to be sufficiently rapid to keep ice from becoming a serious safety problem with them.

Obviously, ineffective braking can be a matter of most serious concern to any railroad man. Composition shoes, this past winter, were found lacking in this regard, not in one or two isolated

instances where the trouble could be dismissed as a mechanical difficulty or a "human error" problem, but in numerous occurrences throughout the winter on many widely separated railroad properties which have been conscientiously testing them. In fact, one road, a captive operation—100% composition shoe equipped—conducted extensive tests over a three month period of this very problem, with our co-operation and with that of the other leading composition brake shoe supplier. On the question of relative safety alone, American Brake Shoe cannot recommend as yet any presently developed composition shoe in place of metal.

Problems of Reliability

Consider *reliability*. We have been unable to date to manufacture into a composition brake shoe the ruggedness, the desirable braking characteristics, and the stability of performance that have long been taken for granted in the metal brake shoe. The characteristic friction curve of the metal shoe has been disparaged by advocates of the constant friction composition shoe. We believe that the metal shoe's friction curve, approximately paralleling the rail adhesion curve, is an important reason for the effective braking provided by metal shoes.

The different braking forces required for composition and metal shoes introduce a further complication that can affect relative service reliability. Today's composition shoes are mounted on the standard metal shoe brake head, but the high friction available in the most common composition shoes requires reduced braking pressures to avoid wheel sliding at high speeds. Without adequate provision for replacing these shoes with similar composition shoes, it is obvious that if they are replaced by metal shoes the light braking pressure will result in a significant reduction in braking power. Conversely, if a composition shoe is applied to a car equipped for metal shoes, the resulting heavy braking can be dangerous.

Work is going forward on two principal approaches to this problem. One approach is to develop a fully compatible composition shoe—a shoe which would not only be dimensionally interchangeable with the standard metal shoe, but which would also match the metal shoe's friction characteristics to the extent that no conversion or adjustment of the braking system would be necessary. The other approach, a practical interim solution which we have advocated to the A.A.R., is a different brake head design for each type of shoe, which would accept only the proper shoe for the car.

Further, with respect to reliability, the problem of brake shoe breakage is one of some importance. Today's composition is a relatively fragile material compared with metal, and the problem of keeping it intact until it is worn out is a tough one. This is particularly true in freight service, where the metal shoe's average life is about three years. In order to justify roughly three times the price, composition shoes would have to stand the punishment of merely being hung on a freight car for nine years or so. Our tests to date cannot lead us to assure such durability. Even three years of service from composition shoes is questionable.

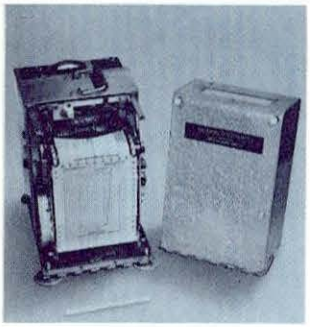
What Is True Economy?

This brings up problems of *economy*. In round figures, composition shoes should provide three times the life of metal to justify their use. In some special instances, greater life than this is reported; in others, not so great. In some applications, metal shoes show superiority. Shoe life is only a part of the cost story, however, as wheel economics enter the picture, too. With a flanged composition shoe, for instance, it is said that if the wheel flange is worn down at the same rate as the tread, wheel turnings might be eliminated. If this could be achieved with a specially designed shoe for the wheel in question, what about total wheel life? Is tread wear reduced, or is flange wear merely increased? What if the flange wear exceeds the tread wear, producing low flanges, as has occurred in some cases? Has any improvement been gained? Or is the wheel removed from service months earlier because of total wear, or because of tapered wear beyond the 1 in 20 limit prescribed by the A.A.R.? There are many conflicting stories and experiences—no clear advantage, certainly, has been established for the economical superiority of composition shoes in comparison to metal.

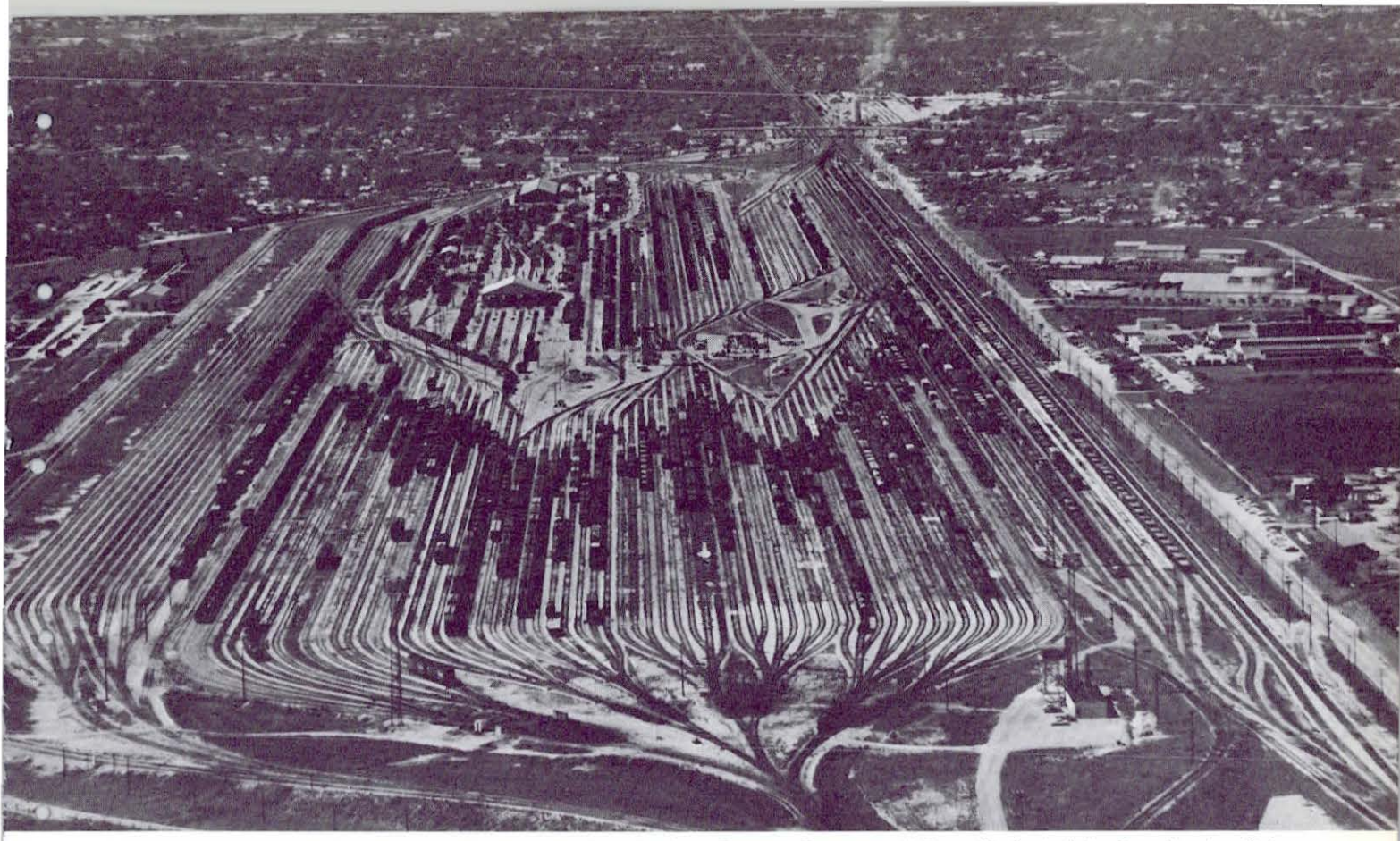
Further Research Indicated

Under these circumstances, American Brake Shoe cannot in good conscience recommend the unqualified use of *any* composition shoes in place of metal. We can and do recommend that you try our Comet shoe in comparison to any other composition shoe. Today's composition shoes can be lived with—provided their inherent disadvantages are recognized and operating crews are educated to their peculiarities. They may give evidence of producing long life. With proper locomotive and train handling techniques, they may help eliminate slid flats at low speed and thus contribute to operating savings. (This, of course, is true of metal shoes, too, where proper locomotive and train handling can be just as important a factor in getting the most out of your brake shoe dollar.) While excessive wheel wear can be a problem in most instances, it may be tolerated in some applications. They are quieter on some equipment and noisier on other. They do give smoother stops, especially at the instant of stopping. But at the present stage of development, they can also give problems—even serious problems—and this concerns us and prompts us to bring you this 1960 report on the subject.

We *can* and *do* endorse the metal shoe for *safety*, *reliability*, and *economy* for regular use in railroad braking. With the metal shoe as a standard of performance to equal or exceed, intensive development and testing—both by suppliers and by railroads—are directed toward a truly satisfactory composition shoe. Our research continues toward this end.



This portable recording instrument was developed by American Brake Shoe engineers to chart decelerations throughout an entire test run. It is so sensitive that it can detect changes as small as 1/100th of one mile an hour per second. Using inertial guidance principles, this instrument is so accurate that it is possible to compute speed and distance of car travel without physical connection to the wheels.



Gravity switching yard of Southern Pacific at Houston, Texas, uses 65 Racor Mechanical Car Retarders for efficient and economical operations.

Racor Mechanical Retarders

• Eliminate skate costs • Increase yard efficiency • Pay for themselves

The modern classification yard has been widely heralded as the last word in railroad efficiency, mechanization, and automation. From hump to ladder tracks, engineering has teamed with experience to develop new ways of handling cars faster, by less manpower, and with less damage to rolling stock and lading.

One of the problem areas resisting the trend to a fully automated yard is the far end of the yard tracks. With retarders doing away with brakemen riding the cars, skates and skate men have become widely used to bring the first car on a track to a stop, and to hold it against the impact of succeeding cars. The disadvantages of this practice, from the standpoints of both expense and safety, are evident. What has been needed is a simple, automatic retarder to brake these cars to a stop, yet allow ready passage of the string when the track is pulled.

The Racor Mechanical Car Retarder has been developed to fill this need. Simple, rugged, self actuating, it needs little or no attention once installed and adjusted. It does not even require a source of air, vacuum, electricity, or other power. And it's economical.

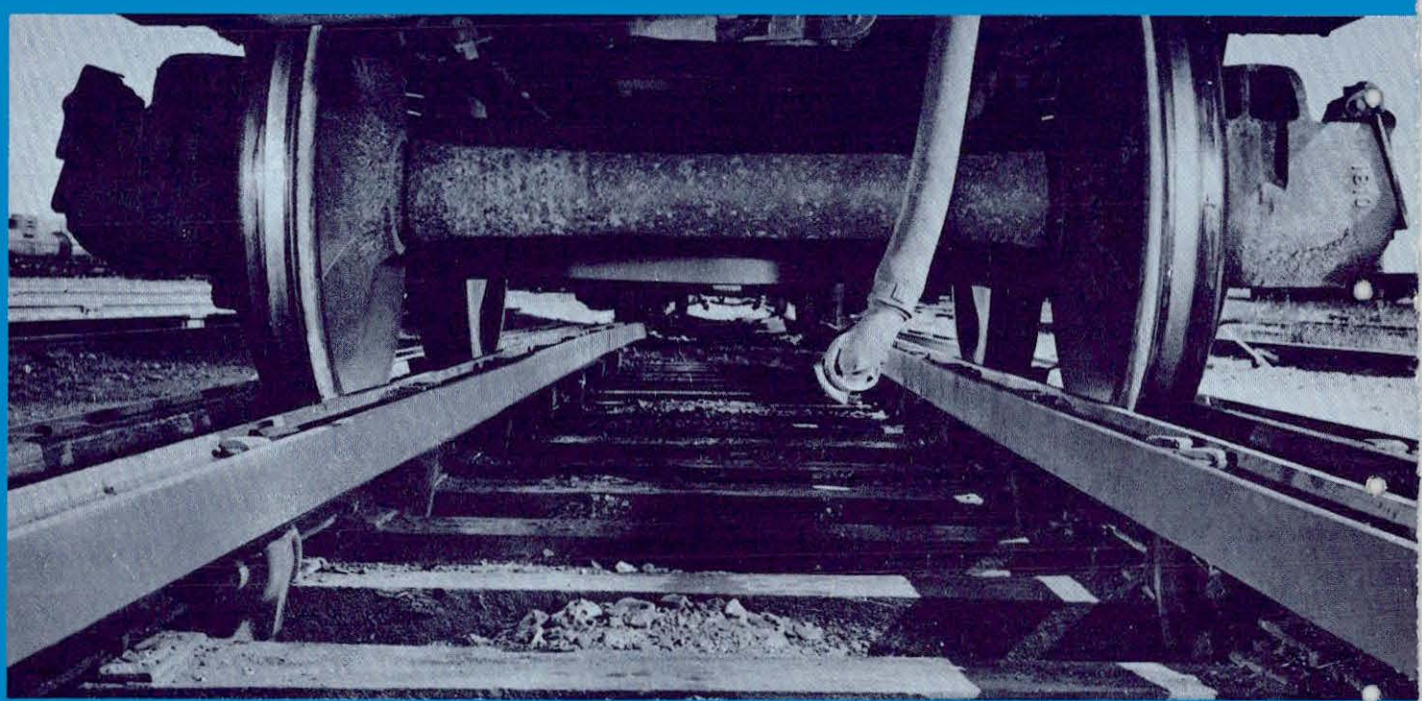
How It Works

The Racor retarder consists of spring loaded rails which apply retarding force simultaneously to both rim and back of flange of each pair of wheels. It is made up of two units located opposite each other, one on each running rail. Generally supplied in 39 foot length, each retarder unit consists of one running rail and two retarder rails, connected by nine spring assemblies. Each unit is installed with a nominal 5 inch space between retarder rails. When a car wheel enters the unit, the retarder rails are forced apart against spring pressure, providing a braking effect on the wheel. The retarding forces are applied to opposite wheel faces in such a way as to eliminate the possibility of derailment. Retarding action is entirely mechanical, and no difficulty is encountered in moving either the cars or the locomotive through the retarder when the track is being pulled.

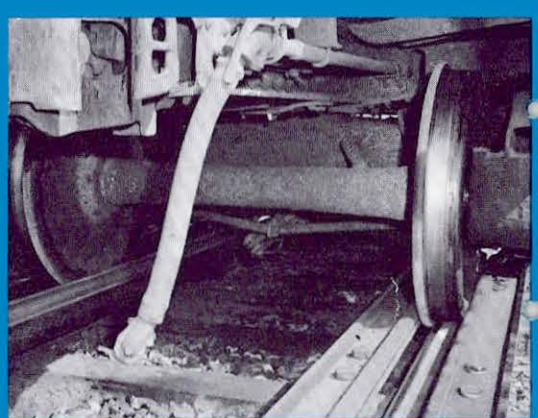
A car rolling down a grade possesses a considerable amount of kinetic energy. In bringing the car to a stop this energy must be absorbed by the retarder. The Racor Mechanical Car Retarder absorbs this energy at the rate of 9,000 foot-pounds per foot of retarder length, or 350,000 foot-pounds for a 39 foot retarder, based on a standard four axle car.

Typical Applications

The principal application of the Racor Mechanical Car Retarder is in hump yards near the leaving ends where skate men are ordinarily used. Hump yards generally have a grade to help keep cars moving until they are near the leaving end. Where downhill grade in the yard proper is too steep, it is sometimes beneficial to put a short



Retarding action is provided when car wheels force apart a pair of spring-loaded rails on each side of each running rail.



Retarding force is applied safely to opposite wheel faces on each set, and can be adjusted by spring settings.

retarder half way down to reduce car speed before it hits the full length retarder near the leaving end. Such a test installation is in service in a midwest railroad yard where the classification tracks are on a 0.30% grade.

Another use for the Racor retarder is at piggyback loading docks. Engineers do not always stop trains soon enough when pushing cars into position; and even when they do, the runout of slack permits the cars to move far enough to cause damage. The engineer can feel the retarder action on the cars and stop in time. Also, the retarder can prevent the trucks and trailers from moving the cars away from the ramp when their tires strike the guide rails on the cars.

The steel industry, coal industry, mining and other industrial and railroad locations have special car retarding and holding problems that can be solved by use of the Racor retarder.

Pays for Itself

The Racor Mechanical Car Retarder will pay for itself by the savings derived from elimination of skate men or car riders, by savings through elimination of derailment and car damage, by eliminating maintenance of skates and by improved yard operation.

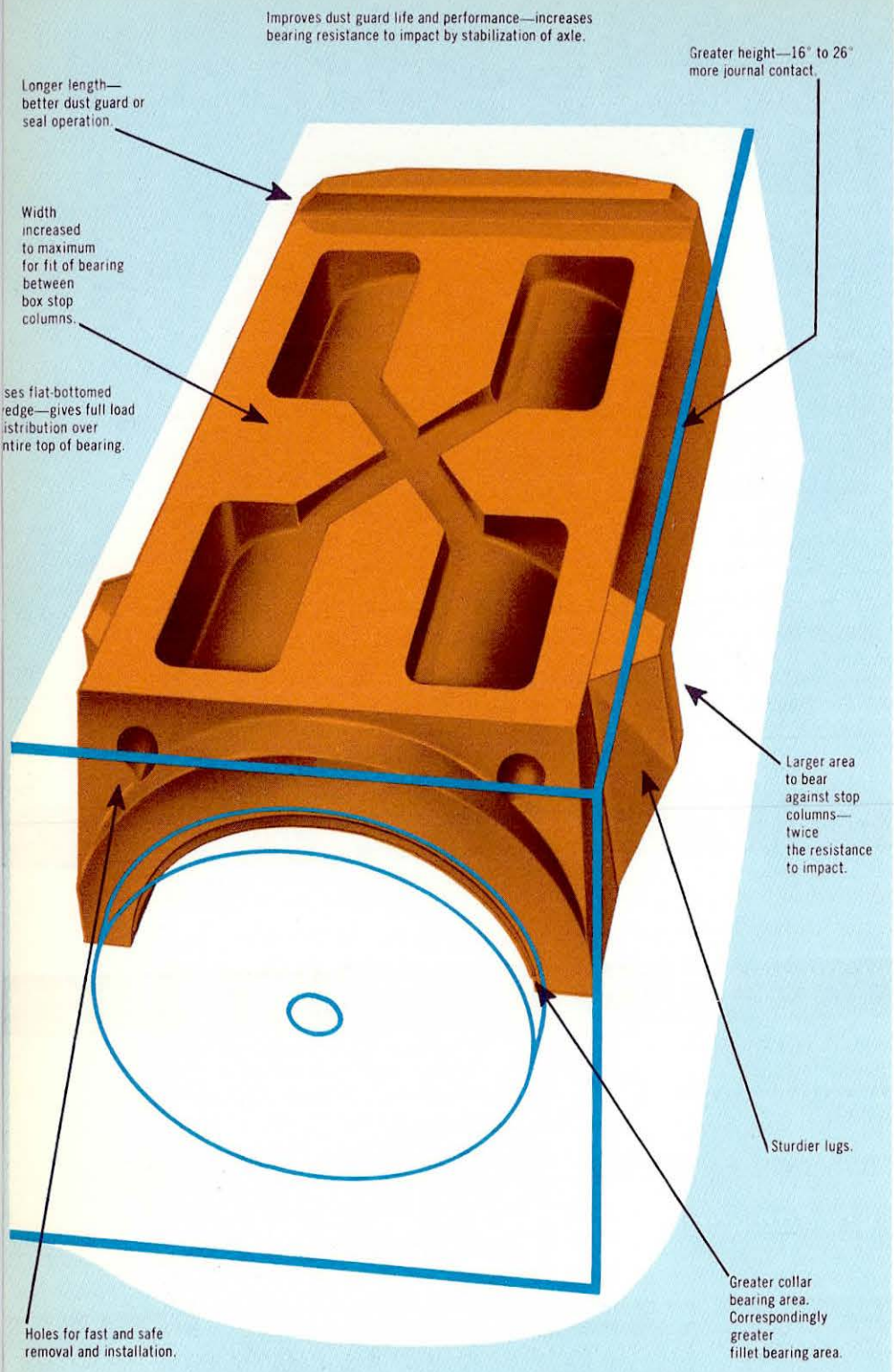
The possible savings at any particular yard are dependent on the present costs of stopping cars by skate men. A comparison between the cost of the retarders on an annual basis and the annual expenditures for skate men and other related costs must be made in order to determine the rate of return on the investment in retarders. The retarder is furnished in various lengths from 19 ft. 6 in. to 39 ft. Installed cost may be less than $3,000.00 per track.

A brief motion picture is available showing the Racor retarder in action. Your Brake Shoe representative will be glad to show it at your convenience . . . and to arrange for a test installation so that you can evaluate the retarder's operation in your own yard. Why not contact him today?

COMPARE THESE ADVANTAGES

The Racor Mechanical Car Retarder has seen service in a number of yards. It offers these principal advantages:

- **Simple**—no complicated mechanism.
- **Rugged**—built of heavy rails, strong brackets, powerful springs.
- **Self-contained**—no pipes, wires, or other connections to any sort of power supply.
- **Reliable**—dependable braking action, rain or shine, month after month.
- **Economical** — installed at moderate expense; costs next to nothing to maintain.
- **Practical**—proven in daily service winter and summer in California, Oregon, Illinois, New York, Texas and Quebec.


Improves dust guard life and performance—increases bearing resistance to impact by stabilization of axle.
Greater height—16" to 26" more journal contact.
Longer length—better dust guard or seal operation.
Width increased to maximum for fit of bearing between box stop columns.
ses flat-bottomed edge—gives full load istribution over ntire top of bearing.
Larger area to bear against stop columns—twice the resistance to impact.
Sturdier lugs.
Greater collar bearing area. Correspondingly greater fillet bearing area.
Holes for fast and safe removal and installation.

A practical, low-cost attack on the hot box problem

THE ABSCO POSITIVE CONTROL FLAT BACK BEARING

- No modification expense.
- No complicated accessories.
- Resists bearing and axle displacement.
- Protects dust guard — reduces oil consumption.
- Improves lubricator performance.
- Greater capacity to resist impact forces.
- Provides doubled stop column contact area.
- Resists tilting under impact.
- Reduces grabs and spread linings.
- Interchangeable with steeple-back bearings, using a simple flat-bottomed wedge.
- A.A.R. approved for limited application for test in interchange service.
- 2,500 car sets now on test by 18 leading railroads.

AMERICAN Brake Shoe COMPANY

Quality products cut your ton-mile costs

GEARED TO PROGRESS RPI MEMBER

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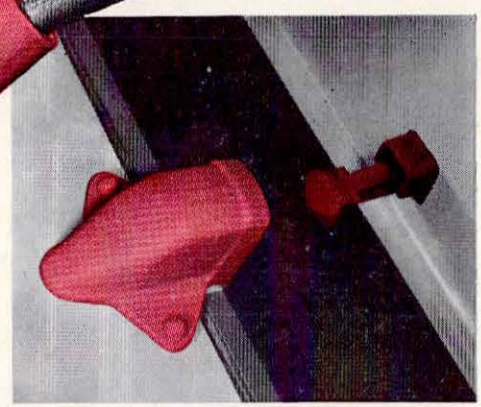
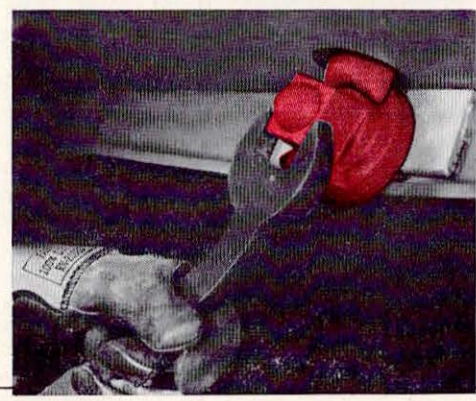
WINE®

PAYLOK

FOR SINGLE HOPPER DOOR OPERATION





THE ONLY HOPPER LOCK WITH PUSH-PULL ACTION!

SIMPLE INSTALLATION . . . requires the application of only two parts . . . the operating sub-assembly on the door and the adjustable latch pocket on the chute.

FULLY ADJUSTABLE . . . common irregularities in car construction can be easily overcome when door is applied to assure a tight door fit on every hopper.

ASK YOUR WINE RAILWAY REPRESENTATIVE FOR FULL PARTICULARS...OR WRITE TODAY!

THE WINE RAILWAY APPLIANCE CO. *Division of* **Unitcast** *Corp.* TOLEDO 9, OHIO

What About Hotbox Detectors?

► **The Story at a Glance: With the weight and speed of today's trains—plus growing shipper insistence on schedule maintenance and service reliability—the detection, prevention and cure of hotboxes remain a major problem for railroad operating and mechanical officers and employees.**

One recent answer to the problem seems to be the automatic hotbox detector—which won't prevent them, but will, when properly installed and used, catch them in time to avoid serious consequences.

Here, and in the pages which follow, are six key questions about the location, use and efficiency of hotbox detectors—and a compilation of answers showing where and how they can be used to produce the best results for the owning railroad.

Should hotbox detectors be connected into signals?

Two railroads have hotbox detectors which are connected into their signal systems. Such detectors automatically set signals to the Stop aspect when a hotbox is indicated. Interconnection has the advantage of eliminating any delay between the detection of a hotbox and the stopping of the train—and, its proponents claim, it also eliminates the possibility of human error. An attendant conceivably could overlook a hotbox indication; on the other hand, he could give a false alarm. On one railroad, for example, the detector operator mistook a roller-bearing indication for a hotbox and set a signal to stop the train.

Where detectors and similar protective devices are connected into the signal system, the ICC—in Section 136.602, Rules, Standards and Instructions—requires that a signal be set to an Approach aspect which the train will meet prior to reaching the stop signal. This prevents sudden and potentially dangerous stops. "This does not mean that where hotbox detectors are installed in automatic block signal territory, they must be interconnected with the signal system," notes G. B. Anderson, of the ICC Bureau of Safety. "It simply means that where they are connected into the signal system, the indications of any signals affected by their actuation must be consistent with the normal functioning of the system."

Where hotbox detectors installed along the line are not connected with the signal system, two types of signals may be used for stopping trains when a hotbox is indicated: (1) CTC or interlocking signals; and (2) special aspects on these or automatic block signals. The controlled signals are set to the Stop aspect, and the special aspects are displayed. When stopping at the signal, a member of the train crew calls for operator or dispatcher to find the hotbox location.

One railroad, which has detectors at a number of locations, collects information on journal conditions at a central point where constant supervision is provided. When information is received at the recorder center that an abnormal or dangerous condition exists, the train is immediately contacted by radio and the crew is given the car's location.

A major argument against connecting the hotbox detector into the signal system is the fact that there are varied opinions as to what amount of differential deflection constitutes a hotbox. The deflection that is critical (i.e., that would indicate a hotbox) is affected by such varying conditions as weather, time of year, and car rollability. If tied in with the signal system, the hotbox detector differential deflection must be set at a certain value, above which all trains will be stopped. This stopping of trains is of great concern to many railroad men. This brings up the question of whether the detector should have an automatic alarm system to indicate that a hotbox has been detected and action should be taken, or whether the recording tape should be read by some person in authority to make the decision.

How efficient are hotbox detectors?

The subjects of train stopping and what constitutes the proper differential deflection for a hotbox are basic to answering this question. In the early days of hotbox detector operation (1956-57), opinion favored stopping all trains showing an 8 to 10mm or more differential deflection between ends of the same axle. A not-too-rare occurrence was for a train crew to phone in that they had inspected those cars which had indicated hot journals, and could find nothing wrong with them. Some of these cars probably had incipient hotboxes which had cooled off. One railroad, after analyzing this problem, found that one reason might be that brasses which were not properly seated, thus causing the abnormal condition, became reseated due to slack action in stopping the train.

Some railroad men contend that they are stopping far too many trains. A trainmaster commented, "We don't want to stop them, unless the situation is such that if we don't stop them we will put them in the ditch." Some roads have overcome the train-stopping problem by readjusting their critical differential deflections to higher minimums. One railroad, which stops trains with axles showing a differential deflection of 8mm or more, has made it a practice to have trains with axles showing 6 to 8 mm deflections inspected at the next wayside operator location.

On another road, if the man reading the tape has a reasonable doubt about a particular car, instead of stopping the train he notifies the crew by radio to watch the car and to inspect it at the next regular stop. On this road, men are not instructed to stop a train at any definite pulse amplitude; they use their own judgments by comparing the abnormal pulse against the overall amplitude pattern.

As to efficiency, railroad men cite figures ranging from 60% to over 90%. One road, over a five-month period, had the following record on 137 trains stopped for hotbox indication: 107 trains (79%) found hotboxes; 5 trains (4%) found sticking brakes; 21 trains (15%) reported no trouble, and 4 trains (2%) found new wheels, new style packing or roller bearings were causing hotbox indications.

From the experience of this road and others, a good average efficiency figure appears to be about 80%. Incipient hotboxes appear to help keep this figure

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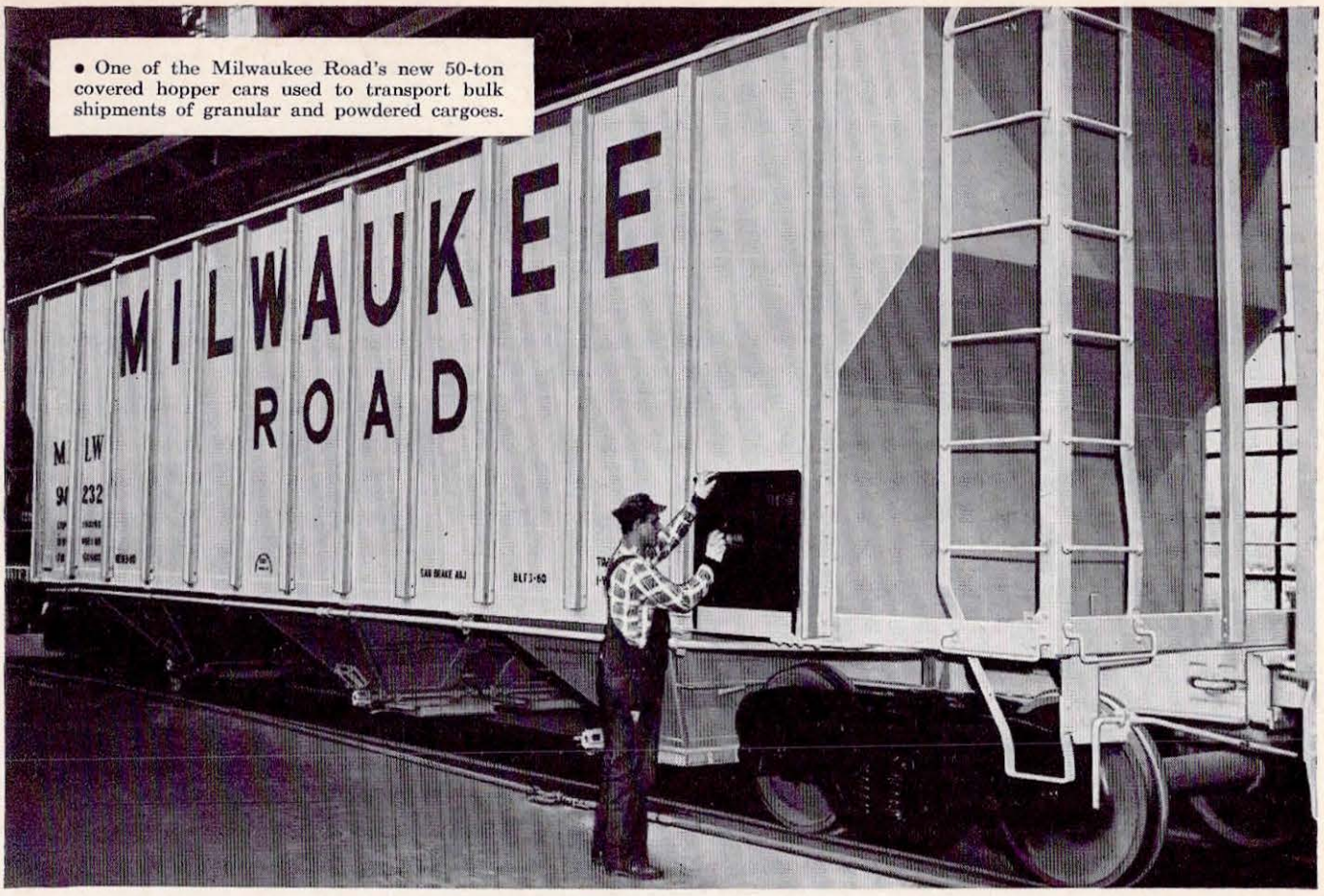

• One of the Milwaukee Road's new 50-ton covered hopper cars used to transport bulk shipments of granular and powdered cargoes.

4 big reasons why leading railroads use POLYCLUTCH LINING FOR COVERED HOPPER CARS

More and more railroads are using Pittsburgh's POLYCLUTCH Lining in covered hopper cars.

• **Its time- and money-saving advantages** have been thoroughly proved in service in thousands of cars hauling a wide variety of powdered and granular ladings.

• **Carefully detailed records** show POLYCLUTCH cuts maintenance and handling costs these four important ways:

1. **Goes on fast and easy.** Apply two coats by hot or cold spray.
2. **Speeds cargo handling.** Ladings will not cling to its hard, non-porous surface.
3. **Eliminates contamination loss.** POLYCLUTCH is non-toxic, odorless and tasteless, has no damaging effect on foodstuffs. Reduces cleaning and sanitation problems, too.
4. **Cuts maintenance cost.** Being tougher and more flexible, POLYCLUTCH has greater resistance to abrasion, impact and repeated cleanings. Also withstands corrosive acids, alkalis, mold, mildew and fumigants.

POLYCLUTCH-lined covered hopper cars have been hauling the following products for years:

Flour	Ammonium nitrate
Oat flour	Vinyl plastic resins
Graham flour	Polyethylene
Durum flour	Polystyrene
Sugar—	Para formaldehyde powder
cane or beet	Diamathaceous earth
Cerelose	Carbon black
Corn cones	Various clays
Starch	Powdered iron ore
Rice	Alumina ore
Cracked wheat	Bauxite
Feed ingredients	Calcined gypsum
Mill feed middlings	Cement
Mill feed aureomycin solids	Hydraulic lime
Soybeans	Phosphate rock
Soybean meal	Sulphur
Cottonseed meal	Potash
Farina	Sodium tripoly phosphate
Dehydrated alfalfa	Tetra sodium phosphate
Brewers' grits	Milo
Borax	Roofing granules
Boric acid	Bisphenol "A"
Sodium sulphate	Bentonite

POLYCLUTCH Lining is approved by the U.S. Food and Drug Administration

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 (*Continued from page 50*)

down. The reason advanced by some railroad men is that the incipient hotbox, having a lower deflection, has a good chance of cooling during and after the train has stopped. The crew is then unable to detect any difference in heat between this journal and any other in the train. This is considered particularly applicable where railroads use the detectors to inspect trains as they approach yards.

Many railroads report improved efficiency ratings with increased detector usage. This is due to better performance by crews in inspecting trains. Standard practice is to inspect all journals on three cars: the car on which a hot journal is indicated, the one in front and the one behind. Improved hotbox detector maintenance also has helped improve the efficiency factor.

The automatic alarm feature now available for hotbox detectors is another factor which will affect their efficiency. If the critical deflection is set low, the alarm will indicate more potential hotboxes than actually occur. This will tend to lower the efficiency factor. On the other hand, setting the critical differential deflection too high may cause the alarm system to pass over a hot journal that might cause a wreck.

Is the automatic alarm feature desirable?

One group of railroad men contends that the recorder tape should be examined by a responsible person who should make the decision concerning train stopping. Roads that hold to this view have interlocking operators, dispatchers, or car foremen read the recorder tape.

On the other hand, those who favor the automatic alarm feature contend that the dispatchers or interlocking operators have enough to do already, and certainly should not be required to read a recorder tape, particularly when such tape should be read while the train is passing the detector. If a hotbox is detected, the automatic alarm will indicate the journal or journals so that the dispatcher has to read only a counter. If no hotboxes are detected, the dispatcher need not pay any attention to the recorder or alarm system.

Proponents of the automatic alarm feel that hotbox detection has developed to the point where reliable automatic alarms are now available. Thus the hotbox detection system is not a burden on the employee.

Opponents of the automatic alarm feature contend that hotbox detection has *not* progressed to the point where a dispatcher or operator need only stop trains which have actuated the alarm system, or look at the recorder tape at only those journals. Opponents feel that due to changing weather conditions and time of year, it is essential that the dispatcher or attendant at the recorder location read the entire tape for the train to ascertain whether a high differential deflection is abnormal or indicates a potential hotbox. Where detectors are used to inspect trains as they approach yards, some railroads want car foremen to examine the tape for incipient hotboxes which might not be hot enough to actuate an automatic alarm system.

Hotbox detector equipment now on the market can indicate two kinds of abnormal conditions: (1) a hotbox condition, and (2) a lower differential deflection but one that could be considered an incipient hotbox.

Automatic alarm systems usually include an "engine eliminator" which depends upon wheelbase. The system is put into operation by the first standard axle spacing. A number of new cars already have a somewhat longer wheelbase, and the Mechanical Division of the AAR is considering making larger wheels mandatory on high capacity cars, which may require a longer wheelbase.

This in turn may require changes in the automatic system to respond to all freight car trucks.

The tendency to centralize dispatcher locations and the more widespread use of pushbutton CTC control machines enabling a dispatcher to control longer territories than formerly, would tend to indicate that automatic alarm features would be desirable to reduce the duties of the dispatchers.

Should the recorder tape be examined?

This question is partly answered in the preceding discussion. One railroad has a hotbox detector installation with the automatic alarm feature. When a hotbox is detected, an adding machine tape is printed out at the dispatcher location with the number of the car in the train and the location of the hot journal.

In this installation, no recorder tape is prepared. Another railroad has the automatic alarm feature in which hotboxes are indicated by counters. An interlocking operator also examines the recorder tape.

Such double checking may appear useless, but examination of tapes has revealed incipient hotboxes which have not reached the critical differential deflection that is required to activate the alarm system.

This factor, according to many railroads, is an important one, and the reason why many roads insist that the recording tape be examined. Some roads have experienced extreme cold weather conditions where hotboxes had differential deflections which were above those of the rest of the train, and yet were below that normally required to actuate an automatic alarm system or below that normally encountered during summer months. Thus it would appear that if an automatic alarm system were used, adjustments must be made for the varying climatic and weather conditions.

Where hotbox detectors are installed in approach to yards, a common practice is to have car inspectors or car foremen examine the recorder tapes.

Most roads that have such installations inspect only those journals which are indicated either hot or potentially hot.

One railroad which is installing hotbox detectors with the automatic alarm feature is planning to have the recorder tape at the detector location. The signal maintainer will change recorder tapes once each week in the installation being set up on this railroad.

The recorded tape will be kept for 30 days, as a matter of record in case of any questions concerning train stoppages.

(*Continued on page 54*)

SAB

SAB, THE FULLY AUTOMATIC BRAKE SLACK REGULATOR
EXCLUSIVE DOUBLE-ACTING, MECHANICAL SCREW-TYPE

AAR APPROVED

now making savings on thousands of freight cars of all types in interchange service. The SAB Brake Slack Regulator, with the smooth, quiet action is establishing new records for superiority in service and providing maximum efficiency and economy. SAB Automatic Brake Regulators eliminate the need for manual adjustment and insure substantial savings in terminal servicing and expediting day-to-day train movements. For proven performance and dependability in brake slack regulators investigate SAB. Write for full information.

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GEARED TO PROGRESS
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MEMBER

 (*Continued from page 52*)

Where should detector indications be sent?

One railroad sends all hotbox detector indications to a central office. Attendants at this office radio information to train crews as to which journals are indicated hot.

Other railroads which have made hotbox detector installations in CTC territory have generally made it a practice to bring the indications into the dispatcher's office where the CTC machine is located. Thus when a hotbox indication is received, the dispatcher can set a CTC controlled signal to the Stop aspect. When a member of the train crew calls in, he can inform them which journal or journals are indicated hot. Where railroads are consolidating their dispatcher locations, it may well be that hotbox detector indications will be sent to such a central dispatching office.

When hotbox detectors are installed in approaches to yards, the recorders are usually in the yard office or the car foreman's office. In these installations the detectors may be from 5 to 10 miles from the yard. The customary practice is to have the train continue into the yard even though hotboxes are indicated.

Roads which have a few hotbox detector installations or relatively isolated ones, send the indications to an interlocking tower. The detector is usually located a few miles in approach to such an interlocking. The recorders are at such towers because there is an operator on duty 24 hours daily. If, at a later date, a transfer of interlocking control was made, then undoubtedly, the hotbox detector recorders and equipment probably would be moved.

What's the best place to locate detectors?

While most roads maintain a rigorous and continuous journal maintenance program, hotboxes continue to develop which should be remedied before the train will arrive at an inspection point. To detect such conditions is the reason for installing hotbox detectors along the right-of-way between yards and inspection points.

The most obvious advantage of line-of-road detection is the prevention of wrecks due to overheated journals. Majority opinion seems to favor installation of detectors about 30 miles out of yards and junction or interchange points where cars are received. This distance depends upon stops and running speed. These detectors, it is reasoned, will catch hotboxes which have developed since the train left the yard or junction.

A growing opinion among a few railroad men is that hotbox detectors should be located about every 30 miles to make a continuous check on journal conditions. This would aid in detecting incipient hotboxes, and those that take longer than the running time of 30 miles out of an inspection point to become hot.

Others contend that by installing hotbox detectors in approaches to yards, hotboxes and incipient hotboxes which require attention will be caught. Also, hotboxes will be detected just before the trains pull into the yards where they will receive immediate and proper inspection and attention.

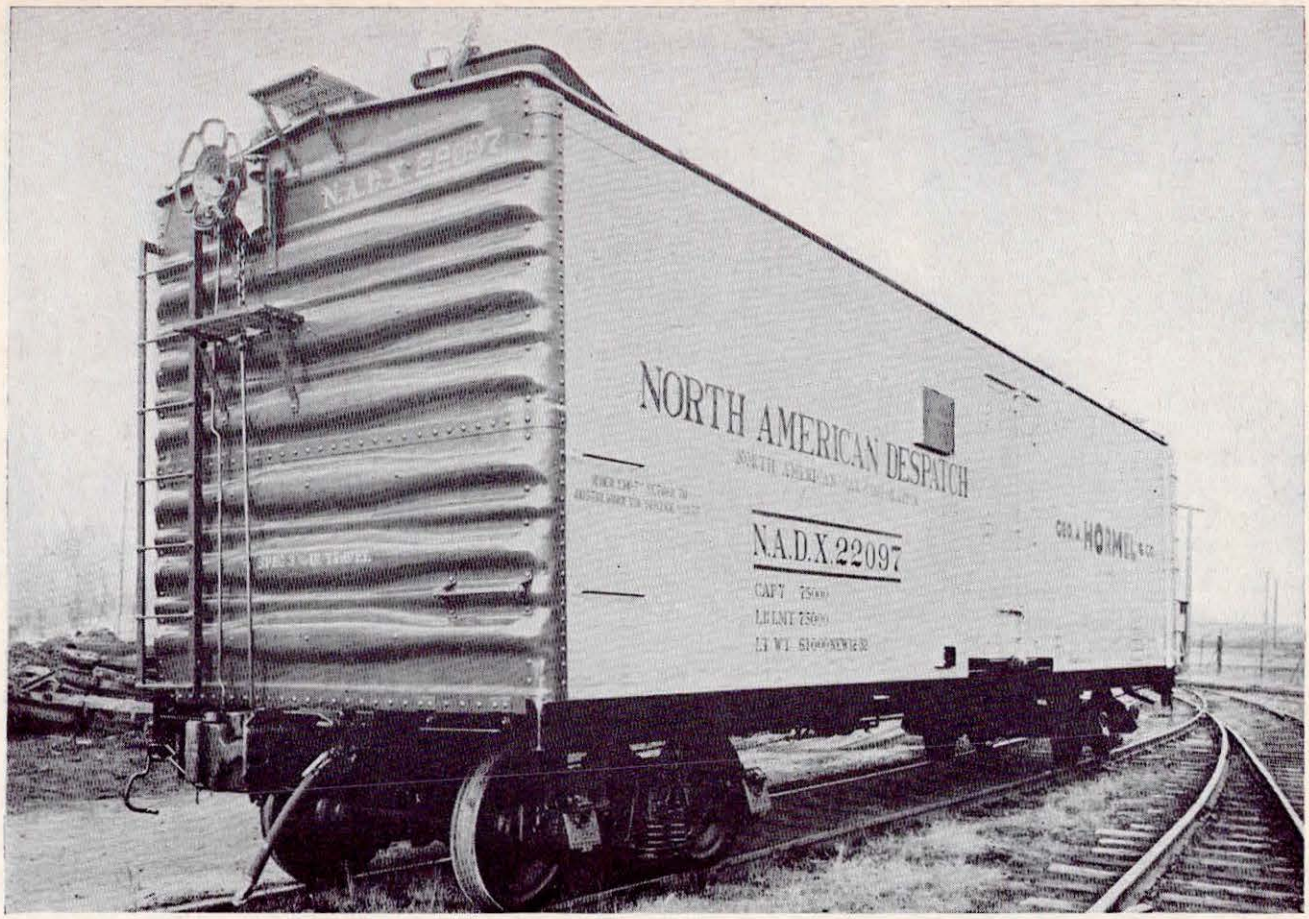
If the practice is followed that only those journals indicated hot or incipient are inspected, then an immediate saving in yard inspection costs can be realized by a railroad.

This reasoning, more than the elimination of a potential wreck, has sold hotbox detectors to some railroad managements.

However, many railroad men agree that the detection problem is really solved by a combination of installations along line of road and in approaches to yards.

CNR Containers Cut Shipping Time

Canadian National is using 6-ft x 8-ft containers to speed freight between Canada's Maritime Provinces and Newfoundland. Six of the ¾-ton aluminum containers will fit a box car. Each container has a capacity of five tons. With each container taking on the status of a carload shipment for less-than-carload traffic, the new service has cut as much as 72 hours from the Moncton-Newfoundland schedule. The system has the added advantages of greatly reducing handling and all but eliminating damage, says CN Gen'l Supt., Transportation, Atlantic Region, R. H. Tivy.



NORTH AMERICAN REFRIGERATOR CAR—UNDERFRAME AND SIDE ASSEMBLIES BY INTERNATIONAL STEEL COMPANY

Frank E. Cheshire says:
"End use and continued use—
the twin requirements of
purposeful design."

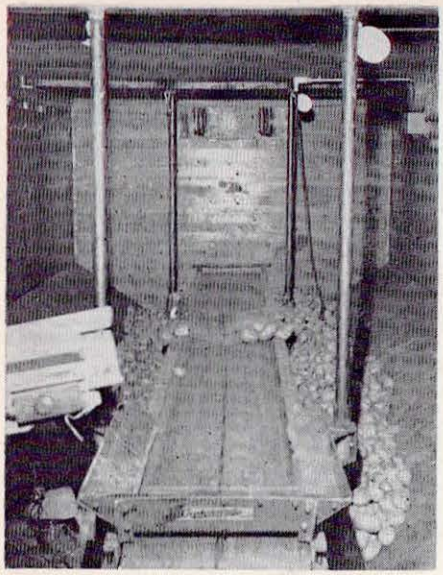
"Purposeful design is not dictated alone by shipper requirements for end use.

"True, today's freight car components must adapt to modern lading, loading and storage methods, but in achieving these new purposes, International Steel has never sacrificed the precision construction which means *more* service at *less* maintenance cost!

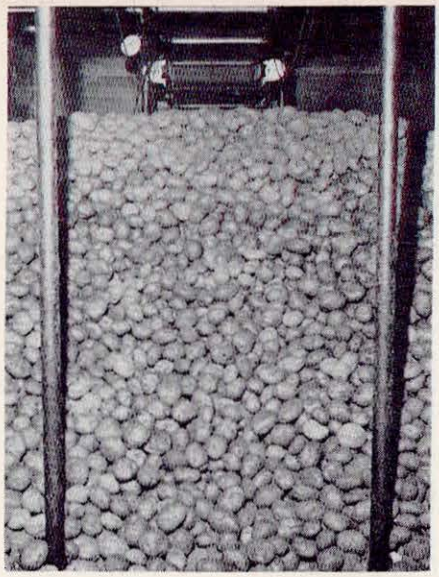
"Whatever the end use of the freight car, its end *purpose* is net revenue.
So at International Steel, "purposeful design" means *continued* use as well as *end* use."

INTERNATIONAL STEEL COMPANY
RAILWAY DIVISION • EVANSVILLE, IND.

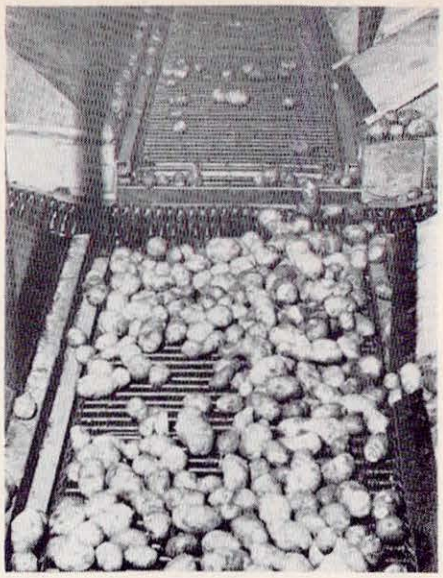
Precision fabricators of correctively designed components



BELT CONVEYOR, lowered to floor level, deposits initial portion of 30-ton potato load on sloped floors of BAR car 2300. Potatoes are delivered by packing-house conveyor extending through doorway (left).



BULK LOADING of potatoes is completed and winches have lifted the belt conveyor against car ceiling. Constant raising of this conveyor as loading proceeds makes possible a speedy operation which does not bruise potatoes.



CHAIN CONVEYORS in car floor permit mechanized unloading. Pick-out boards (right) cover these conveyors so potatoes do not rest on them in transit. Sloping floors make possible much faster unloading.

BAR Builds Conveyor Produce Car

Automation may come to the loading and unloading of a large variety of fruits and vegetables through developments by the potato-hauling Bangor & Aroostook. A conveyorized, insulated box car, designed by the BAR to solve a problem associated with today's potato retailing practices, will probably soon be undergoing tests with oranges, onions and other similarly-shaped produce.

Basic concept of the new car evolved when J. C. Hickson, the BAR's assistant regional vice president—sales, talked with potato-packing firms at major produce centers in the East. Potatoes which move from northern Maine's Aroostook county in 100-lb bags are subsequently repacked into 10-lb polyethylene bags for distribution at supermarkets. The packaging firms were unanimous in asking the BAR's potato sales specialist for a method which would handle potatoes in bulk without expensive and damaging rehandling.

The push-button produce car is the result of joint efforts by Mr. Hickson and BAR mechanical engineer H. W. Hanson. Design and construction took approximately six months.

The blue, white and red car is one of the road's insulated box cars with underslung heater. It has been fitted with two chain-type conveyors, 24 in. wide, running longitudinally at floor level from the ends of the car to the doorway. A third chain conveyor runs across the car between the door openings. The floors have been rebuilt to slope down to these conveyors, which are used for unloading. Hinged pick-out boards cover the longitudinal chain conveyors when the car is being loaded and during transit.

Loading is accomplished by two 18-in. wide belt conveyors which can be raised by built-in winches as the potato load builds up. All of the conveyors and winches are electrically powered. At shippers' and consignees' warehouses the conveyors within the car can be used in coordination with similar conveyors on loading platforms.

25-Minute Unloading

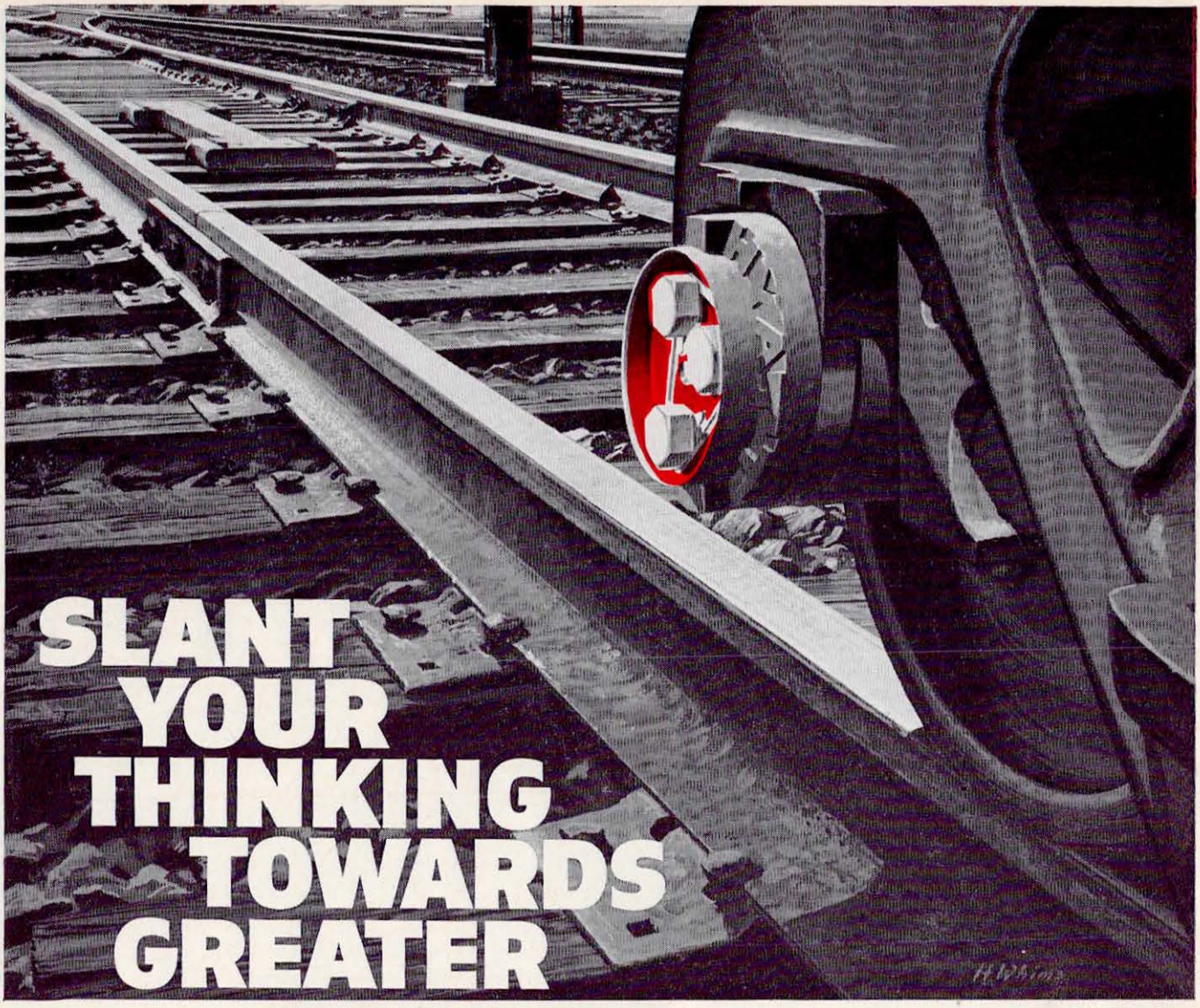
Following completion last May, the car made an initial 30-mile test run between Mars Hill, Me., and Houlton, with potatoes destined for starch manufacture at Aroostook Potato Products, Inc. The car was loaded at the same speed at which potatoes came from the grader line at the Mars Hill packing house. In Houlton, it was unloaded in just 25 min.

The first off-line revenue trip was a shipment of quality potatoes from M. S. Johnston & Sons in Fort Fairfield, Me., to Safeway Stores, Inc., at Kearney, N.J. Lading of the car was 61,780 lb, as compared to an average of 50,000 lb when potatoes are moved in the traditional 100-lb bags. The road expects the average bulk shipment will be 65,000 lb. Along with increasing the payload, there is a considerable reduction in labor involved both in loading and unloading. Bruising of the potatoes is virtually eliminated in the new conveyor system.

"Response to the car from people who receive and repack potatoes in the large market centers has been enthusiastic," Mr. Hickson says. "We envision an immediate traffic potential for several such cars because of lower handling costs and quality control features which the car provides."

W. G. Robertson, president of the BAR, states: "The pushbutton produce car is another step toward our goal of providing an integrated transportation service and filling the needs of an ever-changing industry. It's a car specifically tailored for a particular group of our customers."

The BAR estimates it can utilize 50 of these cars immediately. Currently, the road is investigating the patent possibilities of its new produce-handling system.



PROFITS

. . . with HYATT'S new TAPER freight bearing!

Now's the time, as through-freight runs approach passenger train speeds, to take a new slant on your future profits. That's what Hyatt has done—with a new taper freight bearing specifically designed for trouble-free service on the ruggedest schedule.

These new bearings will pay for themselves in operating economy. Watch your net revenue rise as Hyatt taper freight bearings help to eliminate delays, reduce damage claims, increase car availability, improve service, and win more of the shippers' goodwill.

You can cure the hot box problem. Thus increase the earning power of new cars by keeping them in service day-in and day-out. For experience proves that Roller bearings are the surest and most economical way to stamp out the hot box.

No wonder railroading's leaders agree that only when the majority of all freight cars roll on anti-friction bearings can our railroads make the most of their earning potential. Think about tomorrow and tomorrow's profits, and stay abreast with the equipment you buy today. Specify Hyatt taper freight bearings for all your new car orders.

HYATT *HY-ROLL BEARINGS*
FOR NON-STOP FREIGHT

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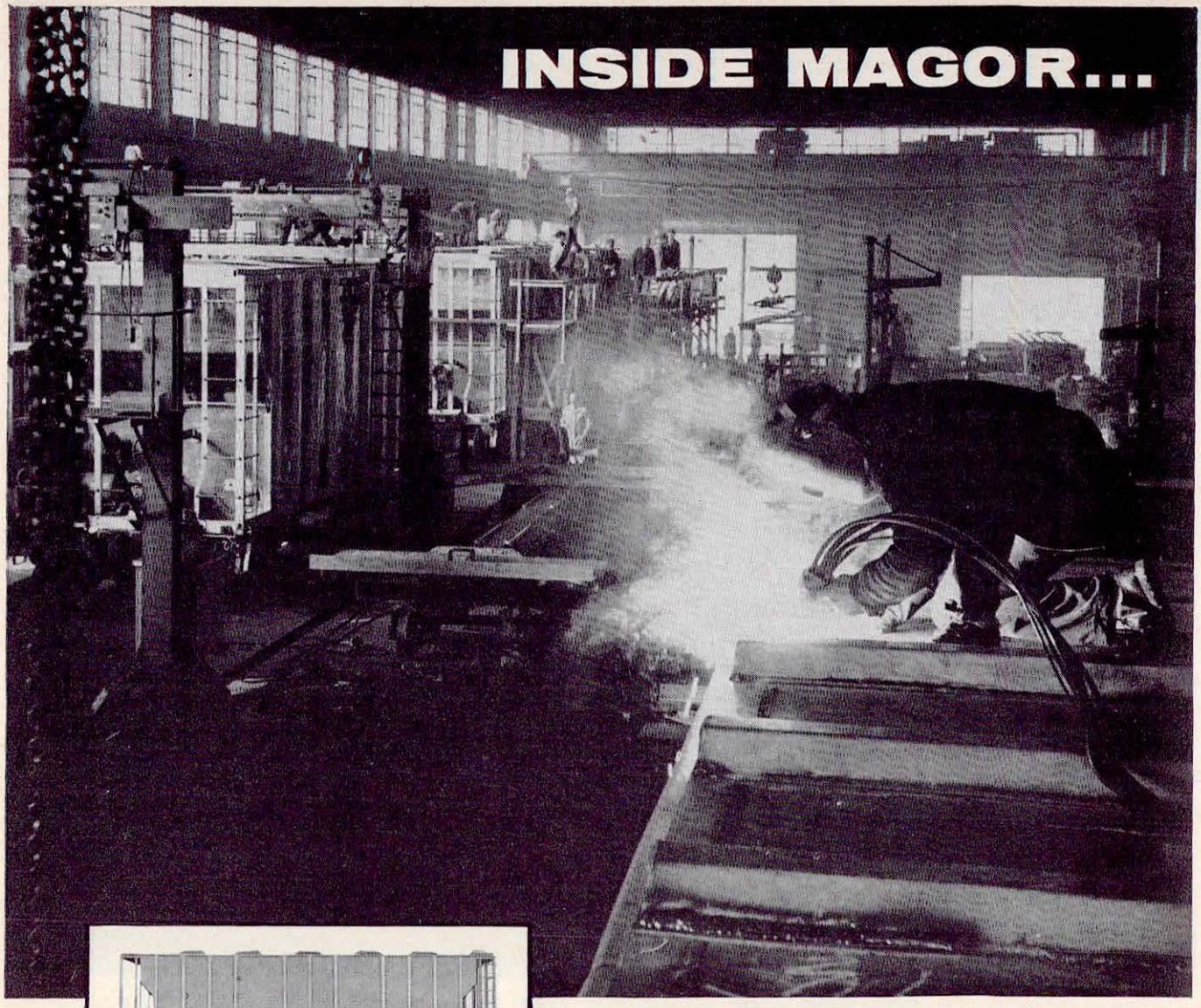
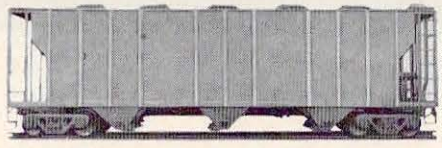
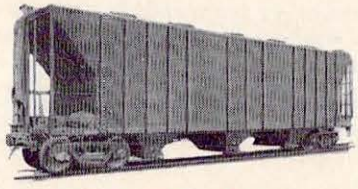




Aluminum Covered Hopper Car
3818 cubic foot 100 ton capacity
Weight 50,100 pounds



Low Alloy—High Tensile Steel Covered Hopper Car
3930 cubic foot 94 ton capacity
Weight 63,700 pounds

PAYLOAD IS THE PAYOFF!

Weight eliminated in the new larger, lightweight cars by Magor means greater payload in every operation. And because these lightweight cars are built to take punishment, their heavyweight performance means reduced operating costs as well. Payload is up—overhead is down with these revolutionary new cars.

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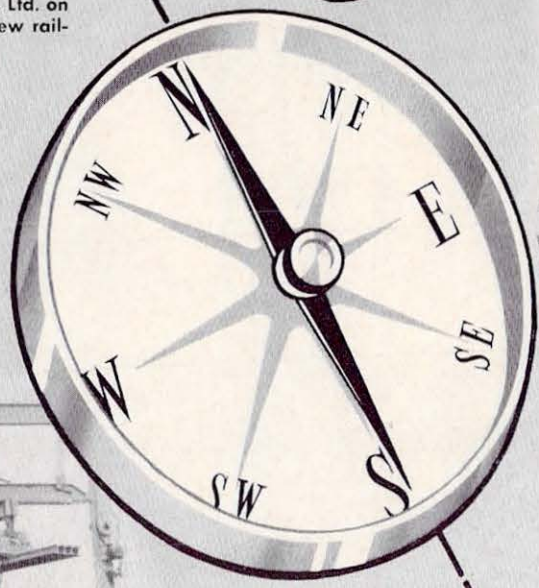
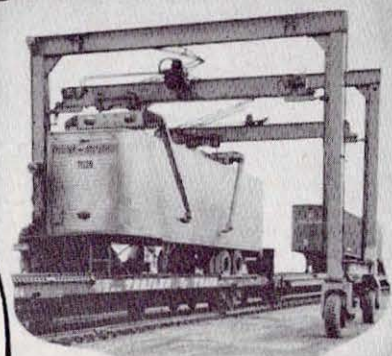
Travelift

VERTICAL LIFT CARRIER

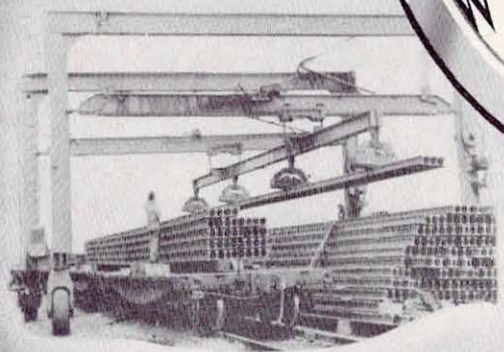
'ROUND THE COMPASS

Travelift lays railroad rails in Northern Quebec, Canada for Mannix Co., Ltd. on Quebec Cartier's 193 miles of new railway.

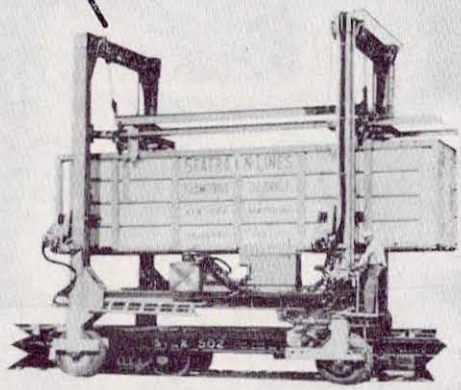




Travelift loads eighteen piggy back trailers an hour at the Pennsylvania railroad yards at South Kearney, New Jersey.



Travelift loads a car of "welded rail" in thirty five minutes at National Cylinder Gas' Chemetron Division in Pueblo, Colorado.



Travelift handles freight containers rapidly for Seatrain Lines at their port at Belle Strasse, New Orleans, Louisiana.

From Hawaii to Iran and Labrador to Venezuela . . . all over America, too. Travelift's versatile lifting is solving many complex handling problems. Particular models launch, haul out, load and unload boats for storage, repair, rail or truck haul . . . handles finished steel and concrete products.

ONE MAN CAN OPERATE

Steering, lifting and propulsion of the ***Self-Propelled*** Travelift are by hydraulics. Turning radius of the Travelift Carrier is short and maneuverability excellent.

Capacities to 100,000 lbs. or custom built to your needs.

Write for information:

TRAVELIFT & ENGINEERING, INC.
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Please send information on the Self-propelled Travelift.

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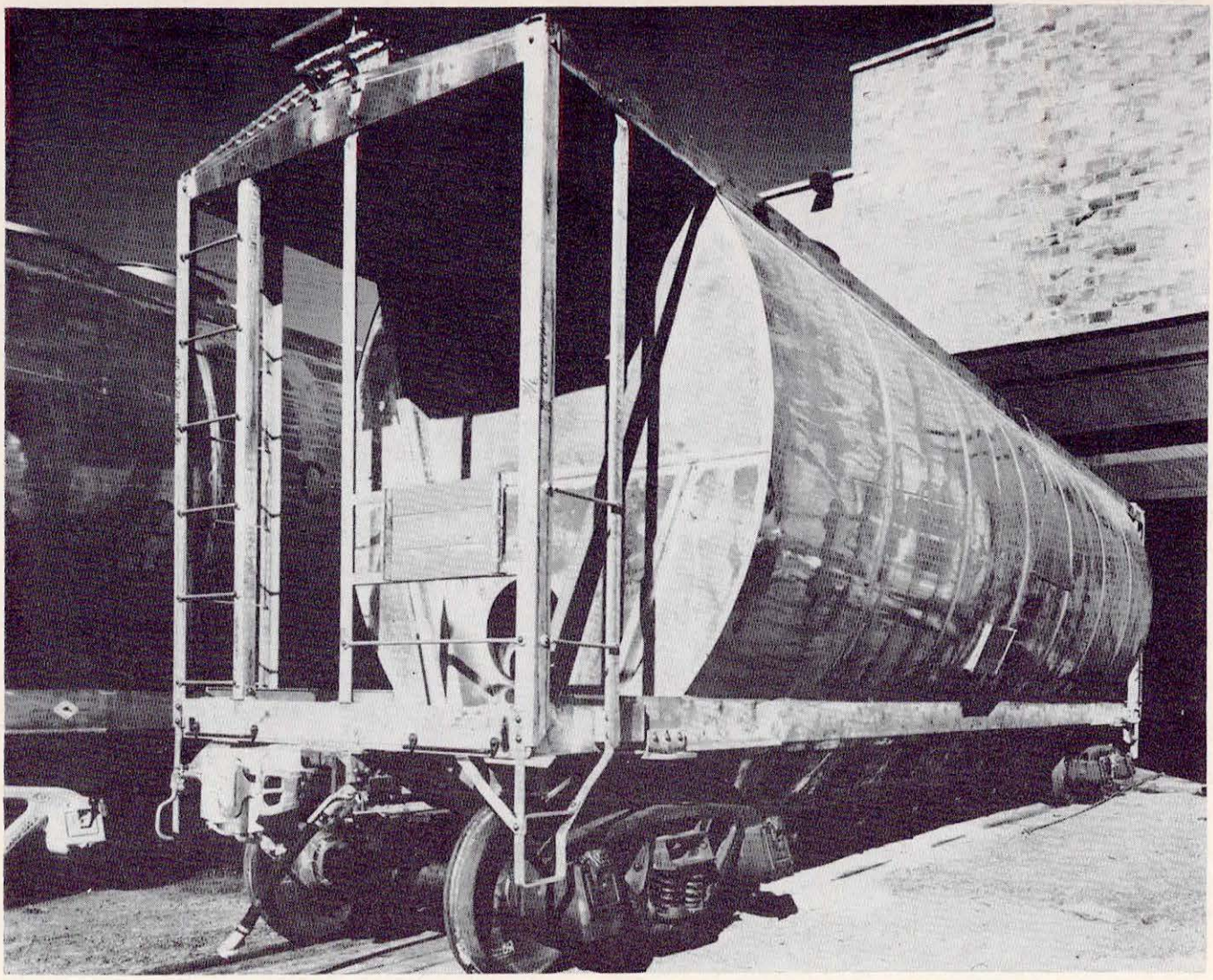


ALUMINUM COVERED HOPPER will be subjected to extensive series of tests by CNR research department. Other three cars, delivered at the same time, are going into regular road service on CNR and Roberval & Saguenay.

Tank Body Cuts Hopper Weight

► **The Story at a Glance: Simplified fabrication and assembly, elimination of a center sill, and extreme light weight are all features of the design of four tank-type aluminum covered hopper cars just completed for the Canadian National and the Roberval & Saguenay. These 3,000-cu-ft cars, built by Marine Industries, have a load limit of 88 tons, with a light weight of only 17 tons. They were designed by the CNR and the Aluminum Company of Canada.**

A teardrop-shaped tank is the outstanding feature of four aluminum covered hopper cars just built for the Canadian National and the Roberval & Saguenay by Marine Industries.

The curved body shape utilizes less material to enclose the required volume of lading. In addition, it has enough strength to permit elimination of the center sill between the car trucks; and does away with need for side posts because of the stability which the essentially tubular structure lends to the side sheets.

This car originated with a design committee formed by the CNR and the Aluminum Company of Canada in 1959, with the assignment of developing an aluminum covered hopper car for chemicals, foodstuffs, and refined ores. Conversion of existing LAHT (low-alloy, high-tensile) steel designs was considered, but ultimately the completely new arrangement was chosen.

Primary objective of the committee was a substantial increase in payload with a minimum increase in first cost. Because of the small amount of aluminum which had to be used (9,500 lb in the 34,000-lb car), and because of the simplified fabrication procedures, Alcan estimates that the premium to be paid for this type of car over a conventional steel car, on a production basis, should be very low. In addition, there is an increase of 10 tons in payload. The rated load limit of 176,000 lb is achieved with ladings having densities of 59 lb per cu ft or more. Sand weighs approximately 100 lb per cu ft and alumina 60 lb per cu ft. The tare-to-load ratio makes necessary the use

(Continued on page 62)

The hot box is as old as the wagon wheel. Today's diesel-powered wagon trains render waste-packed boxes as obsolete as the squeaky wheel and the grease paddle.

"It's the Squeaky Wheel that Gets the Grease"

Journal Lubricators have become Big Business

The Association of American Railroads has modified and toughened the testing procedures for journal lubricators to the point that *any lubricator "approved for test" assures a performance at least three times better than waste.*

This is eliminating many contenders, and some lubricators approved on previous testing procedures would not pass the new test.

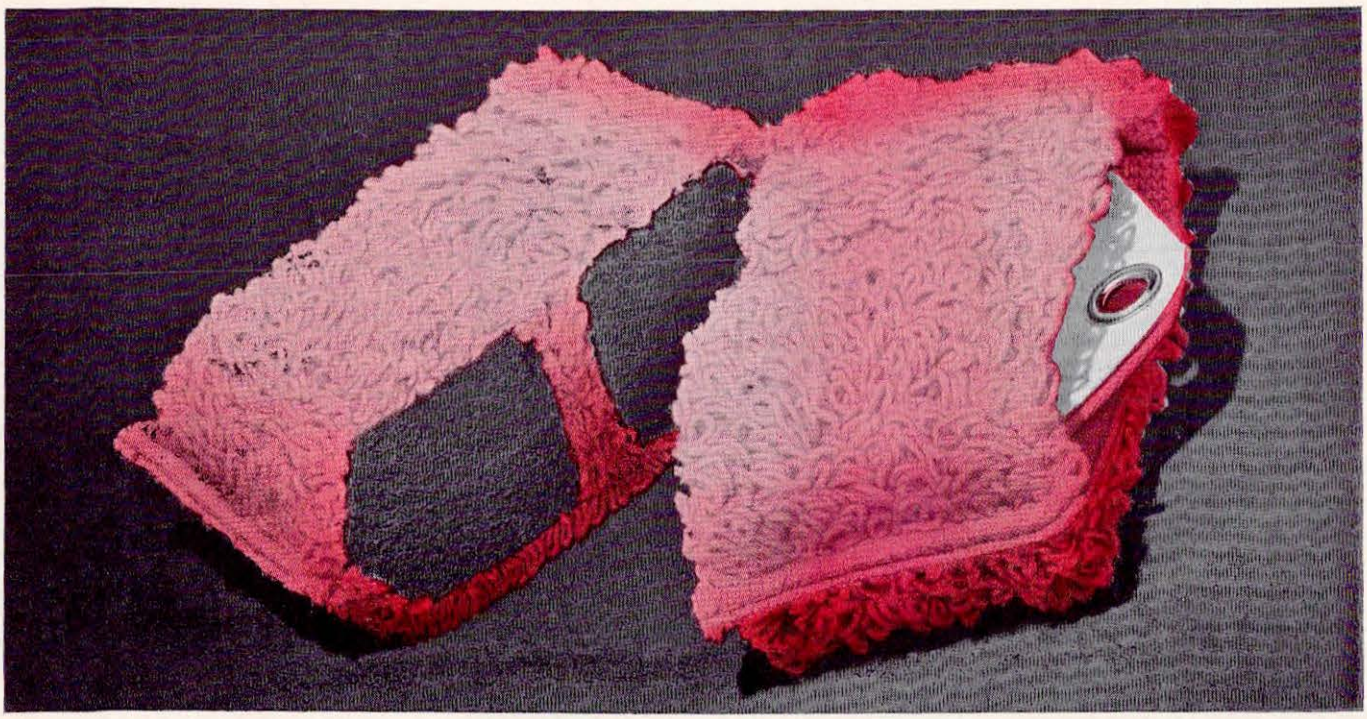
One new lubricator named the ATLAS is being sold without fanfare or exaggerated claims but holds 4½ pints of oil in a saturation test, and 3½ pints for both a wicking test and a feed test. It is stated that these results are 140% of the required saturation test and 275% of the required wicking test.

Approved for test in August 1960, the ATLAS has now been made available to the railroads.

The manufacturers state that the design of the ATLAS pad incorporates all known elements which work together for exceptional performance, which accounts for its having passed laboratory tests with results exceeding the hopes of the manufacturer.

It is a center filter feed lubricator, with all-cotton lock looped fabric. It has recessed ends for minimum collar and fillet wear. The front and rear closures of the pad are designed to minimize oil pumping action. The core is nitrile foam.

The ATLAS lubricator is available from the Beck & Blatchford Corporation, 80 East Jackson Boulevard, Chicago 4, Illinois.



End view and section of the Atlas Lubricator shows the center feed wicking and recessed ends.

of automatic empty-load air brakes.

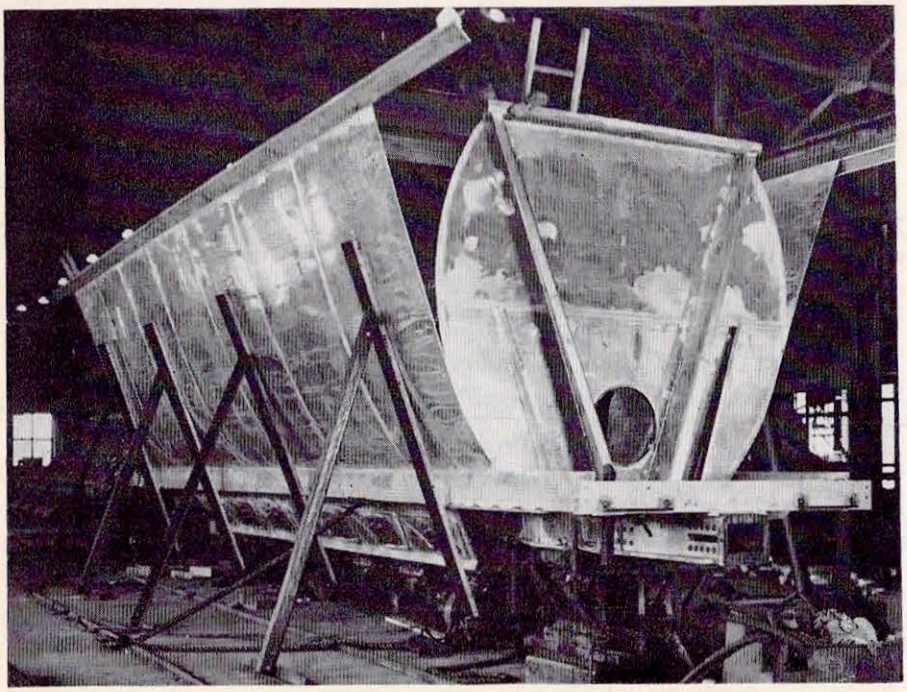
While the four cars just completed all have capacities of 3,000 cu ft, the basic arrangement consists of 5-ft long modules which make possible the building of 2,500-, 3,000-, and 3,500-cu ft cars without major design changes. Cars of the various capacities and lengths can be produced on the same jigs.

Production of only four cars did not make feasible the building of extensive jigs by Marine Industries at its plant in Sorel, Que. Instead, a single jig was prepared which made possible the locating of the major subassemblies and simplified their assembly.

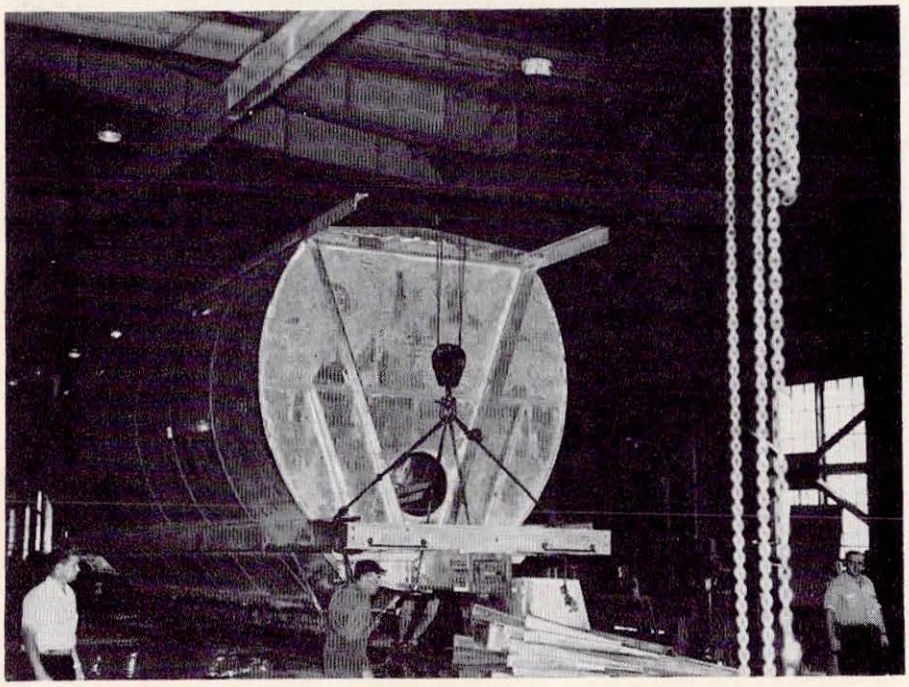
The three basic subassemblies are: 1) sides, complete with side sills and top plates; 2) stub sill assemblies, including shear plates and bolsters, and 3) partitions. The jig built for assembling the car was also used for assembling the sides flat. They were subsequently forced into their final circular contour around the bolsters and partitions. Without any side posts, it was necessary to make the side sheets of ¼-in. aluminum. This is thicker than would be used in cars of more conventional design, but is desirable with aluminum to prevent damage from localized impacts.

Elimination of side posts and center sill also reduced the amount of welding by about 400 ft. All welding was done by the MIG (metal inert gas) process.

Side sheets, end sheets, and intermediate slope sheets are all of ¼-in. Alcan alloy D54S (U.S. equivalent is A.A. 5083). End slope sheets are 5/16-in. plate; the roof is formed of ⅛-in. and 1/10-in. sheets. Transferring the buffing and draft loads from the draft sills to the side sills and tubular tank body is accomplished by a ½-in. shear plate atop the extruded stub center sill at each end of the car. Both the side sills and side plates are extruded, angle-shaped sections.



SIDE ASSEMBLY was built flat and then moved to car for application.



TEARDROP shape evolved as sides were welded to partitions and ends.

Simplifies Unloading

The completed car is 45 ft over strikers. Width over the outside of the tank body is 10 ft, 6½ in. Truck center distance, which also corresponds to the length over the tank body, is 35 ft.

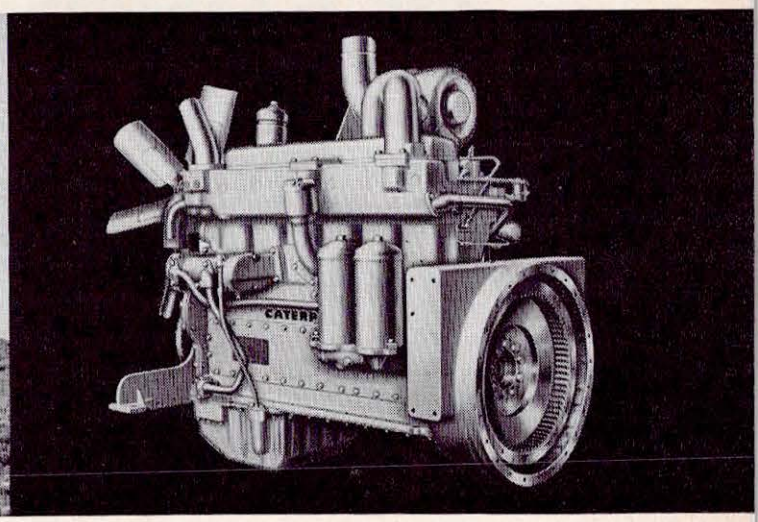
The cars have not been painted but are rated by Alcan as suitable for many commodities which cannot be carried in uncoated conventional cars. It will not be necessary to refinish the interiors at intervals, and cleaning will be simplified. Among the commodities which are to be handled are lime, cement, alumina, gypsum, adipic acid and polyethylene. Recent tests by Alcan have made it possible to assure customers that lime can be moved in these cars.

Absence of the center sill not only simplifies fabrication and cleaning, but will also facilitate unloading. The six discharge outlets are located on the center line of the car and can be operated from either side. Alternate outlet arrangements have been designed.

A CNR car will be subjected to an extensive series of tests to assure the adequacy of its novel design. A program similar to that used for tests on a CNR aluminum refrigerator car in 1958 will be undertaken by the CNR research department. The tests will include a static test, an impact test, a road test, and a fatigue test. Analysis of these, combined with the service experience of the other three cars, will be a basis for determining the future practicability of this car design.

NEW CAT NO. 14 SERIES C MOTOR GRADER

Compact engine plus many other refinements assure top performance, easier servicing, long life



Important changes make up the new Series C No. 14 Motor Grader—big improvements throughout to give you better performance, long life and servicing ease:

NEW COMPACT 150 HP ENGINE The short, rigid block and stress-relieved crankshaft give greater strength and shock resistance. New cylinder head design resists distortion yet has superior cooling characteristics. Large water pump with cast-iron impeller, ceramic seal face, and carbon type seal combined with a 20 per cent increase in radiator capacity improves cooling, lengthens life.

NEW STARTING ENGINE All-weather starting with this new two-cylinder vertical gasoline engine is assured. Replacing the horizontal engine, this design features aluminum pistons and overhead valves for improved performance. Bore is 2.38″, stroke is 2.38″, and compression ratio is 8:1. Over-running clutch in starter pinion prevents damage to starter engine when diesel starts, a year-round starting plus.

NEW SERVICING EASE An advanced fuel system is designed for easier servicing and more efficient operation. Compact fuel injection pumps with barrel and plunger assemblies enclosed in housing help reduce wear, lengthen service life.

Plus all the features that made the No. 14B the most versatile motor grader in the "big machine" field . . .

EXCLUSIVE OIL CLUTCH —provides up to 2000 hours of service without adjustment, equal to about a year of "adjustment-free" operation.

DRY-TYPE AIR CLEANER —removes 99.8 per cent of all dirt from intake air. Can be serviced in five minutes.

MECHANICAL CONTROLS —provide easy engagement. "Anti-creep" lock makes blade stay put under load.

FULL VISIBILITY —operator has unobstructed view of job even while seated.

Now, all Cat Motor Graders feature the compact engine. Like the new No. 14C, the 85 HP No. 112E, the 100 HP No. 112F, and the 115 HP No. 12E are all designed to give you the highest production at the lowest possible cost. Your Caterpillar Dealer can give you the facts and figures. He can prove it both on paper and on your job. Call him today.

Caterpillar Tractor Co., General Offices, Peoria, Ill., U.S.A.

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THE NEW NO. 14C MOTOR GRADER— MADE FOR THE BIG JOBS

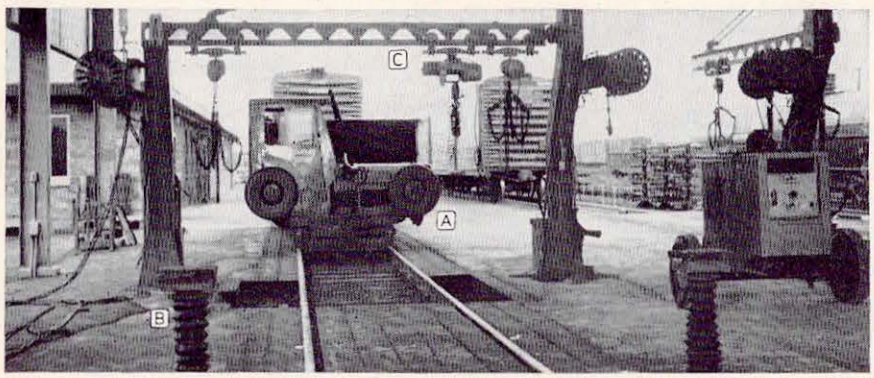
the DYNAMIC WHITING APPROACH

...combines services and facilities

To assure maximum speed and minimum Running Repair costs, railroads are taking advantage of the Dynamic Whiting Approach. It goes beyond ordinary consulting services because it accepts the responsibility for performance. Years of unparalleled application-engineering are focused on specific objectives. Unique manufacturing facilities combine custom fabrication with volume-production economies. The finished products are designed to do a better job, are sturdily built to give years of trouble-free service.

When you need a better way to handle heavy hard-to-manage masses, look to the Dynamic Whiting Approach.

for railroads one result–a complete All Major Equipment Requirements System for freight car repair.



Equipment for the Whiting "Progressive Spot Repair System" includes a Trackmobile Ⓐ to progress and spot cars; RIPjacks Ⓑ to lift car bodies; and Trambeam 3 hoist jib cranes Ⓒ for repairs in disassembly and assembly of trucks. From original consultation through installation and actual use the Dynamic Whiting Approach assures railroads of faster, easier freight car repairs at lower cost.

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RAILROAD EQUIPMENT

File Computer Updates Japan RR Accounting

Delivery of a Univac file computer to the Japanese National Railway is the latest step in a data processing program that began 32 years ago. In September 1927, Railway Age published an article describing the first punch card equipment delivered to JNR. This equipment enabled the railroad to change its freight accounting procedures from a monthly to a daily basis. In those days, JNR used 7 million punch cards annually; the figure now is 27 million. The number of cards is expected to be drastically reduced when JNR completes its changeover to integrated data processing using the file computer.

The increase in punch cards reflects the increase in revenues over the years. In 1927, freight and passenger revenues totaled $275 million, while today they amount to $873 million. JNR operated only 8,000 miles in 1927, compared to 13,000 miles today.

Statistics previously prepared on punch cards included, among others, ton-mile movements, commodities, traffic density, and costs. Use of the Univac file computer will make available statistics on train operation, stock control, cost control and interline freight accounting.

Part of the integrated data processing system that JNR is now installing will be paper tape producing typewriters at all railway operating offices. The paper tape will contain the raw material or data for these statistical studies and accounting reports. Transmission of the paper tape data will be directly to the main computer room at the railroad's headquarters in Tokyo.

Dividends Declared

ELMIRA & WILLIAMSPORT.—$1.16½¢, semi-annual, payable Nov. 1 to holders of record Oct. 20.

ERIE & PITTSBURGH.—resumed, 87½¢, payable Sept. 12 to holders of record Aug. 31.

PHILADELPHIA & TRENTON.—$2.50, quarterly, payable Oct. 10 to holders of record Sept. 30.

PITTSBURGH, FT. WAYNE & CHICAGO.—7% preferred, $1.75, quarterly, payable Oct. 4 to holders of record Sept. 9.

PITTSBURGH, YOUNGSTOWN & ASHTABULA.—7% preferred, $1.75, quarterly, payable Dec. 1 to holders of record Nov. 18.

READING.—4% non-cum. 1st preferred, 50¢, quarterly, paid Sept. 8 to holders of record Aug. 18.

SOUTHERN.—70¢, quarterly, payable Sept. 15 to holders of record Aug. 15.

SOUTHERN PACIFIC.—28¢, quarterly, payable Sept. 19 to holders of record Aug. 29.

UNION PACIFIC.—common, 30¢ quarterly; 4% preferred, 20¢, semi-annual, both payable Oct. 1 to holders of record Sept. 6.

UNITED NEW JERSEY RAILROAD & CANAL.—$2.50, quarterly, payable Oct. 10 to holders of record Sept. 20.

WEST JERSEY & SEASHORE.—special guaranteed, $1.50, semi-annual, payable Dec. 1 to holders of record Nov. 15.

Tax Experts Hear Railroad Woes

► **The Story at a Glance: The 53rd annual conference of the National Tax Association got an earful of railroad tax problems in New York last week.**

James N. Ogden, vice president and general counsel of the Gulf, Mobile & Ohio, told the tax experts that railroad property is being overassessed by at least $3.25 billion dollars in 31 states.

David Berger, city solicitor, Philadelphia, detailed his city's plan for the solution of the mass transportation problem and lauded a bill introduced by Senator Harrison Williams of New Jersey, which would make loan money available for mass transportation improvements.

Larry S. Provo, vice president and comptroller of the Chicago & North Western stated his road's faith in profitable commuter service and told the taxmen that equitable tax assessments could help ease the load.

Other speakers, including President George Alpert of the New Haven, supported these positions.

Inequitable property assessments are costing the railroad industry more than $140,000,000 a year, GM&O Vice President and General Counsel James N. Ogden told the National Tax Association meeting.

He said that the overassessment of railroad property by some $3.25 billion in 31 states is all the more shocking "when compared with the corresponding underassessment of property of other taxpayers by at least $187 billion. This $187 billion of taxable value could produce additional taxes of at least $8.5 billion.

"The railroads," he said, "are working constantly to persuade and educate taxing authorities to improve their methods and practice to reach uniformity of assessment and equality of the tax burden."

On the debit side, Mr. Ogden cited Illinois' practice of assessing railroad property at 100% while other property throughout the state was valued in 1957 (the most recent year for which complete figures are available) at an average of less than 50%. Despite a series of court cases, he pointed out, "the Illinois taxes continue to add more than $18 million annually to the strangling yoke of railroad tax discrimination."

On the brighter side, Mr. Ogden cited Nebraska, where litigation succeeded in reducing Chicago, Burlington & Quincy, Chicago & North Western, and Union Pacific assessments "to reflect an assessment ratio in proportion to full value at the same level as that of property generally."

Mr. Ogden also pointed to situations in several other states, including California and New Jersey.

He called for an end to tax discrimination against railroads.

George Alpert, the New Haven's president, directed the attention of the taxmen to the plight of the commuter. He said that, "if railroads are to survive, they must be granted exemption from taxes comparable to that enjoyed by other modes of transportation."

City Solicitor David Berger, of Philadelphia, told how his city's experiments with subsidized rail service has resulted in substantially reducing the number of cars in the center-city traffic.

He told of the development of the city's two experiments—"Operation Northwest" and "Operation Northeast"—in which agreements were signed with the Pennsylvania and Reading railroads, which enabled the lines to reduce fares and add extra service with the help of subsidies. (RA, Oct. 27, 1958, p. 82.)

"Philadelphia," he continued, "has now moved toward a permanent solution . . . A non-profit corporation has been formed to administer the 'Philadelphia Plan'. For the first time, an agency has been created whose directorate includes representatives of the government, public at large, the railroads, and the railroad unions, each of whom has a direct stake in the successful solution of this problem." (RA, Jan. 25, p. 9.)

Mr. Berger said the City Council of Philadelphia has already enacted basic legislation to give this Passenger Service Improvement Corporation the means to solve the entire traffic and transportation problem for the Philadelphia metropolitan region, which comprises five counties and three states.

"But the long-range success of the Passenger Service Improvement Corporation," Mr. Berger cautioned, "will depend upon the passage of additional legislation [authorizing $8.7 million in loans] now being considered in committee."

Mr. Berger went on to express concern over who is to provide these public funds. "In view of the limited taxing power and fund-raising resources of municipalities and individual states," he said, "it seems clear that only the federal government can finance a large-scale capital improvement program by means of the extension of federal credit."

He termed a bill introduced into the Senate by Senator Harrison Williams, of New Jersey, "a far-sighted step."

He explained that this bill provides for an initial grant of $100,000,000 to constitute a revolving fund which will make possible public facility loans to assist state and local governments and their public instrumentalities in improving mass transportation service in metropolitan areas.

"In summary," he added, "it is obvious that methods and means must be and can be devised to assure continued and improved passenger service on the commuter lines. The financing of the necessary capital improvements

(*Continued on page 78*)

BRT Sues LIRR

The Brotherhood of Railroad Trainmen has filed suit asking $10 million treble damages under the antitrust laws against the LIRR, the AAR, the insurance companies involved in the railroad service interruption insurance program, and 32 participating carriers. The BRT charges that the insurance program constitutes a pooling of resources.

Its illegality, the organization alleges, stems from the fact that the railroads did not get ICC approval of the program. A BRT spokesman said the union had the choice of complaining to the Commission or filing suit—and chose the latter "due to loss of wages, strike benefits paid and legal fees" involved in the LIRR strike. The suit is a class action on behalf of the brotherhood, subordinate lodges and Long Island employees.

Suit was filed in U.S. District Court, New York. W. P. Kennedy, Brotherhood of Railroad Trainmen president, charged that the railroads have set up "walkout insurance, not strike insurance."

He said the program is "not a shield for the railroads, but a sword to use against labor."

STRIKES SPREAD

(*Continued from page 24*)

SUNA's wage demands ended abruptly after one meeting on Aug. 30. A membership vote had previously rejected emergency board recommendation to accept the pattern 4% wage increase and SUNA president Speirs said that his negotiators would renew their "inequity" claim. Following the indecisive Aug. 30 meeting the Switchmen threatened to strike 16 western carriers involved in the SUNA wage talks. "Actually," said Mr. Speirs, "we found we were right back at the beginning. The only way to bring this to a head . . . is to set a strike date." At the request of the National Mediation Board the Switchmen postponed the strike threat from Sept. 8 to Sept. 19. Further talks await action by the Mediation Board.

The Brotherhood of Railroad Trainmen strike against the Grand Trunk Western entered its second week as mayors from several Michigan cities met with the negotiators last week. The strike has so far idled an estimated 13,000 workers in Detroit alone, including 6,400 on the GTW. The brotherhood rejected a federal mediator's suggestion that the dispute be submitted to binding arbitration.

Losses to the railroad are running about a million dollars a week in the dispute over union demands for changes in seven local work rules—concessions have been made in 21 of the original 28 rules involved.

Unlike most U. S. carriers, the Canadian National affiliate is not covered by strike insurance. The striking trainmen and other furloughed GTW employees are eligible for unemployment benefits.

On a third strike front, several subsidiary railroads of United States Steel Corp. were closed by striking trainmen of the BRT. Carriers involved were the Lake Terminal Railroad, Lorain, Ohio; the McKeesport Connecting Railroad, McKeesport, Pa.; the Donora Southern Railroad, Donora, Pa.; and the Newburgh & South Shore, Cleveland, Ohio.

The trainmen also joined the three-week-old strike of United Steelworkers members against Union R.R. of Pittsburgh, another U.S. Steel subsidiary. Altogether, the railroad strikes threw about 30,000 steelworkers in mills served by the struck roads out of work. At issue: demands by rail workers on the steel roads for a contract with the same wage and fringe benefits granted steel workers in last January's settlement of the 1959 steel strike.

Editors Afield

BALTIMORE, MD.

Western Maryland operations are, or soon will be, getting the benefit of about 16 miles of new welded rail, according to G. M. Leilich, vice president (operations). On a five-and-one-half mile portion of the B&H subdivision from Emory Grove, Md., west toward Hempstead, new 115-lb lengths of welded rail replace 90- and 100-lb existing rail. A ten-and-one-half mile stretch from Williamsport, Md., to Big Pool on the westbound main line is getting new 132-lb welded rail. Rail lengths 1,440 feet long are being welded at the Linde Co.'s new plant at Harrisburg, Pa. (RA, Aug. 22, p. 35).

A major improvement in WM's car float operation between Port Covington and Sparrows Point is scheduled to go into service next February. By adding an additional transfer track at Port Covington and modifying facilities at Sparrows Point, WM will be able to handle two car floats at a time instead of one, raising the capacity of the 7-mile float operation by 50% and permitting the retirement of one car float. The overall job will cost $700,000, of which $400,000 goes to a new double crossover and other changes at Port Covington and $250,000 to dredging and modifications at Sparrows Point.

Another change that is being processed this summer, Mr. Leilich said, is replacement of WM's semaphore signals with searchlight-type color signals.

WM locomotives will be 100% radio-equipped by the end of the year, under present plans, Mr. Leilich said. To accomplish this, the road has worked out its own procedure for installing part of the radio equipment permanently in each locomotive and leaving the other part to be added to the lead unit when the crew boards the train. Thus speakers, wiring, switches, etc., are all in place in every unit, but only the control unit gets the expensive tubes. Removable components are handled in a compact, interchangeable tray and are checked out by the dispatcher to the locomotive before each trip.

Another program that should improve operations, Mr. Leilich says, is a six-mile stretch of CTC at Bowest, where WM interchanges with its Alphabet Route partner, P&WV. Yard conditions here require trains to run ahead on the main, then back into Bowest yard. The CTC installation will make it possible to advance westbound trains while the backing maneuver is taking place, without hazard to either.

Starting Sept. 14, WM and P&WV will run locomotives and cabooses through between Rook, Pa., and Cumberland, Md., on westbound AJ-1 and eastbound AJ-12. Instead of the present procedure, which requires the trains to back into Bowest Junction to change crews, trains will stop on the main line (which is not easily accessible by highway), crews will be shuttled about one and one-quarter miles from the yard office by a rail-highway vehicle, and the train will proceed with a maximum delay of five minutes compared to approximately 30 minutes to an hour previously. The details of the method for crew change were worked out by the roads following a procedure suggested by Western Maryland's general chairman of the BRT, Van H. Parsons.

A car-washing attachment on WM's rotary car dumper at its coal pier was designed and built by WM personnel. Costing in the neighborhood of $5,000, it is saving about $2, a car, Mr. Leilich says. The device automatically washes coal cars as they are dumped, after which a checker classifies them for ore loading as they are returned by gravity.

In equipment, WM has acquired some new, rebuilt some old cars. Of 400 new 70-ton hopper cars, 390 have roller bearings and ten cartridge-type. Also in the works: ten 85-ft piggyback flats and two 70-ft airslide cars. WM has completed a $300,000 program to convert 100 boxcars to double-door boxes for the convenience of gypsum-board shippers, Mr. Leilich said. Thirty cars in an improved pulpwood fleet are being converted in WM shops. These are an open grating car designed to be unloaded by any method the shipper chooses.

Answering a query about mergers (and where the WM stands with roads all around it being merged or suggested for merger), Mr. Leilich pointed out that this is not an operating department question. Coordination, however, very definitely is. And on this point, he said that WM is working on a general coordination study with neighboring B&O, with an eye on locations where it might be possible to reduce operating costs by joint operation.

—Rod Craib

The Continuing Outrage

Ballooning Benefits

The justification for unemployment compensation is the mitigation of hardship an employee suffers when he becomes unemployed for causes beyond his control—and to help "tide him over" until he finds a new job.

The railroads pay the entire cost of insuring their employees against unemployment. No part of the cost is paid by employees. Hence there is no moral justification in paying this compensation (railroad money, mind you) to employees who become unemployed by their own choice (e.g., as in a strike); or when they are temporarily unemployed while under suspension for infraction of company rules. Here is what happened recently, in one such instance:

1) A trackman did not report for work on Monday, April 18, 1960.

2) He reported for work on Tuesday, April 19, and, as a disciplinary measure, was suspended for five regular working days which covered Tuesday 19th, Wednesday 20th, Thursday 21st, Friday 22nd and Monday 25th.

3) This employee applied for unemployment compensation to begin Saturday, April 16, through Monday 25th.

4) There is a four-day waiting period in every claim period (the period including Saturdays and Sundays).

5) This employee collected in excess of $50 for the above claim.

6) The only day's compensation that was illegally claimed in the above period was for Monday, April 18.

7. The district director of the Railroad Retirement Board was questioned as to the action the board would take on the illegally claimed day: namely, Monday the 18th. He said that no action would be taken to collect from the employee on this illegally claimed day, because of the high administrative cost to collect. Here is the arithmetic:

Daily rate of pay		$17.16
Federal Income Tax	$3.10	
State Income Tax	.46	
Railroad Retirement Tax	1.17	4.73
Net "take home" daily pay		$12.43
Amount received from Railroad Unemployment		10.20
Loss for not working (Offset in whole or in part by saving in carfare and lunch expense)		2.23

From the above, it seems that the Railroad Retirement Board's handling has taken any sting out of management's disciplinary action.

It is also standard practice to pay employees unemployment compensation when they are not working because they have chosen not to work (i.e., to strike). Thus it is that railroad money is directly used to finance strikes against the railroads—and to make it possible for employees to enjoy a substantial daily income, at their employer's expense, when they are striking against that employer.

In addition, employees eligible for retirement pensions frequently make it a practice to quit work and enjoy their unemployment pay until the maximum is reached, before they apply for their pensions.

Thus, unemployment insurance—justifiable in cases of genuine unemployment where the employee is in no way at fault—is being made much more costly for the railroads, because its benefits are being passed along to the undeserving, as well as to the deserving. It is for such reasons that payroll taxes paid by the railroads for "social security" purposes are 2½ times as high as those paid by truck operators and almost 5 times as high as those paid by barge operators (as H. C. Murphy has pointed out, RA, June 27, p. 21).

The arbitrary manner in which railroads have been singled out for especially expensive "social security" costs is just one of the many ways that politics is artificially increasing railroad expenses—thus making it more difficult for the railroads to compete for traffic. And when railroads suffer traffic losses, their opportunity to provide jobs declines proportionately.

As pointed out in RA, June 27, p. 74, the total extra expense saddled upon the railroads, which other forms of freight transportation largely escape, total up to about 24¢ out of every dollar of freight revenue. This means, of course, that—if placed by government on a basis of equal treatment with that accorded to other forms of transportation—railroads could either (1) reduce their freight rates an average of 24% or (2) add 24% of gross freight revenues to their net earnings. Either course would greatly increase railroad traffic and/or earnings and would, obviously, completely solve the "railroad problem."

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People in the News

CHESAPEAKE & OHIO.—W. C. Wilson, assistant manager of stores, Grand Rapids, Mich., retired Aug. 31. **A. H. Young, Jr.,** assistant regional general storekeeper, Huntington, W. Va., appointed assistant manager of stores, Huntington. Abolished positions formerly held by Messrs. Wilson and Young.

Herbert W. Klemko and **C. George Farmer** appointed general agents, Saginaw, Mich., and Grand Rapids, respectively.

CHICAGO & EASTERN ILLINOIS.—R. E. Brandt, foreign freight agent, Chicago, promoted to general freight agent, St. Louis, succeeding **J. J. O'Neill,** who retired Aug. 31. **M. F. Whelan** replaces Mr. Brandt. The following appointed general freight sales managers, with headquarters at Chicago: **R. J. Grant,** Western region; **Frank R. McVoy,** Midwestern region; **B. H. Ockey,** southern region; **W. H. Peake,** Eastern region. **Thomas J. White,** freight sales manager, San Francisco, transferred to Minneapolis, succeeding Mr. Ockey, and in turn is replaced by **Bruce E. Tomlin. L. E. Kilmer,** general freight agent, Evansville, Ind., exchanged positions with **H. L. Southerland,** freight sales manager, Birmingham, Ala. **J. P. Maddock** named

Arthur E. Baylis
NYC

Wayne M. Hoffman
NYC

manager, freight service and equipment, Chicago, replacing **R. C. Keister,** who retired Aug. 31. **C. J. Ritsert** appointed freight sales manager, Memphis, Tenn., succeeding **E. G. Kasper,** promoted.

CLINCHFIELD.—Jack R. Hamrick appointed district freight agent, Tampa, Fla., succeeding the late **Robert W. Hornsby.**

MISSOURI PACIFIC.—J. E. Bernhardt, Jr., trainmaster, St. Louis Terminal division (east side of river), Dupo, Ill., transferred to Jefferson City, Mo., to succeed **E. M. Bishop,** who retired Sept. 1. **A. W. Rees,** trainmaster, Nevada, Mo., succeeds Mr. Bernhardt, and in turn is replaced by **C. D. Barton,** assistant trainmaster, Lake Charles, La.

W. Chunn, assistant superintendent communications, retired Sept. 1.

NEW HAVEN.—Edward J. Barrett, general industrial agent, Boston, Mass., appointed general manager—industrial development at that point, succeeding **Percy E. Benjamin,** retired. **K. T. Kelly** appointed superintendent passenger transportation, New Haven, Conn., succeeding **Frank E. Moran, Sr.,** retired. Abolished position of superintendent of transportation, formerly held by Mr. Kelly, and the duties and functions transferred to the superintendents of passenger and freight transportation.

NEW YORK CENTRAL.—Arthur E. Baylis, vice president—freight sales and service, appointed vice president—marketing, heading the newly created Freight Marketing Department (RA, Sept. 5, p. 7). **Wayne M. Hoffman,** chairman of the board of New York Central Transport Co., named also vice president—freight sales, NYC, heading the newly created Freight Sales Department.

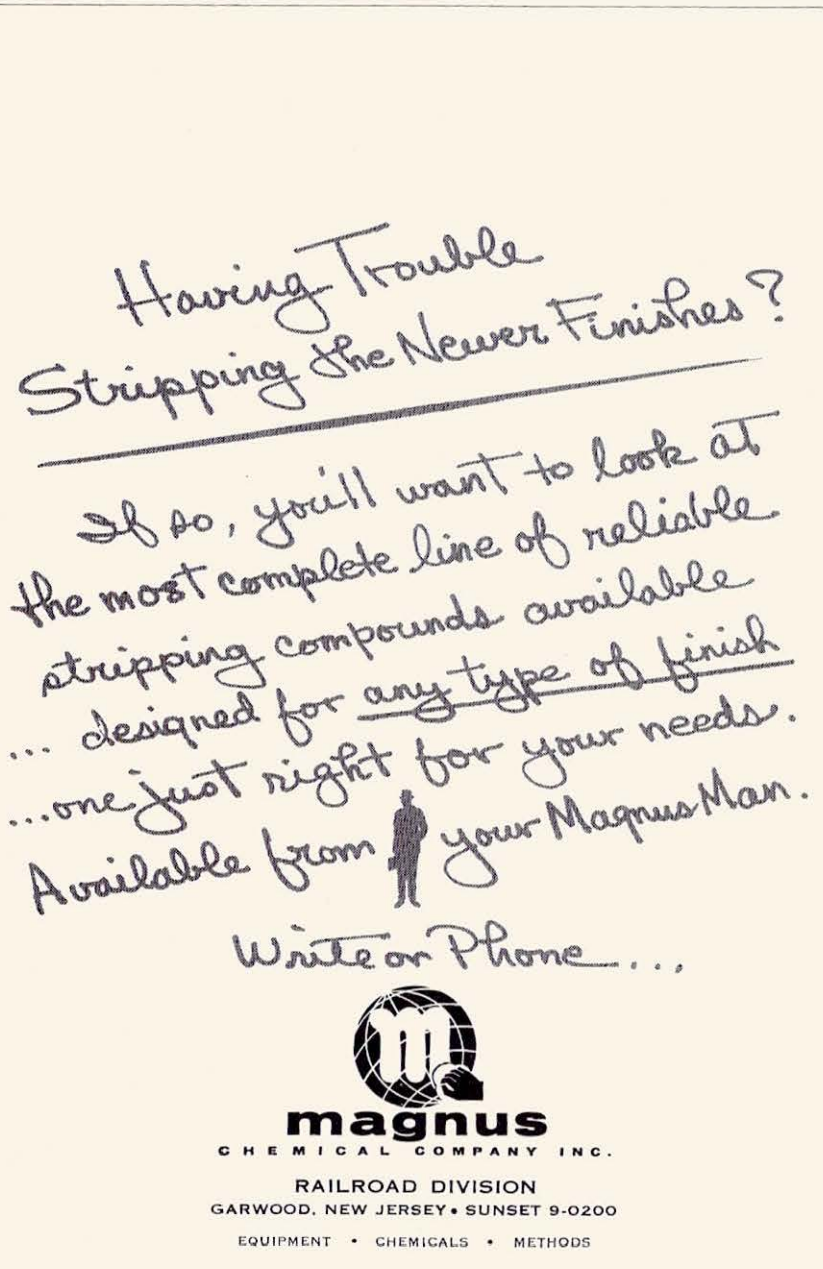
SANTA FE.—Lawrence Cena, assistant superintendent, Kansas City division, Argentine, Kan., appointed superintendent, Oklahoma division, Arkansas City, Kan., to replace **H. C. Willis,** retired. **G. E. Becker** succeeds Mr. Cena. **D. R. Warren** named acting trainmaster, Panhandle division.

TEXAS & PACIFIC.—Ervin Rehfeldt, district passenger sales representative, Dallas, Tex., appointed manager-passenger sales there, to succeed **William B. Battle,** who retired Sept. 1. **John H. Mann,** passenger sales representative, Dallas, replaces Mr. Rehfeldt. Mr. Mann's successor is **Floyd E. Thompson,** passenger sales representative, who in turn is succeeded by **Albert B. Whitis,** traveling passenger agent, Dallas.

John N. Simpson, general livestock agent, Fort Worth, Tex., retired Sept. 1.

Supply Trade

George Q. McNamara Co., 3305 W. Lafayette Blvd., Detroit, Mich., has been appointed sales representative for ULOK cub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air filters in Michigan for **Union Carbide Development Co., Division of Union Carbide Corp.**

Pedley Equipment Co., Charleston, W.Va.; **Holliday, Inc.**, Washington, D.C.; and **W. Wallace Neale Co.**, Richmond, Va. also have been appointed sales representatives for ULOK cube air filters.

Datum Engineering Co., Bellaire, Tex., has been appointed sales representative for ULOK cube air filters.

The **Clute Corp.** has announced acquisition of **Truck Equipment Co.** of Denver, manufacturers of Truco trade name material handling equipment for the railroad and utilities industries.

Charles H. Smith has been appointed special assistant to the president, **Westinghouse Air Brake Co.** In this capacity Mr. Smith will discharge certain functions with respect to the company's European affiliates with operations in France, Germany, Italy, Belgium, Switzerland, and Spain.

The **Robert W. Walker Co.** of Los Angeles and San Francisco has been appointed West Coast and Mountain States advertising representative for the **Pocket List of Railroad Officials.**

Ralph L. Hitz has been appointed general sales manager, **Transco "S-L" Division** of **Transportation Specialties Co.**

Archer-Daniels-Midland Co. has appointed the following sales agents for its Freight Liner products: **W. W. Replogle,** Branford, Conn., to all New England railroads; **Canadian Bronze Co., Ltd.,** Montreal, to all Canadian roads.

Kenneth DeBaun has been appointed district sales manager at the newly opened sales offices of **Farr Co.** in San Francisco. Mr. DeBaun was formerly district manager at New York.

Charles B. Leber, manager of the sales division of the defense products department, **Caterpillar Tractor Co.,** has been appointed advertising manager, to succeed **Burt M. Powell,** who retired Sept. 1. **Frank S. Foster,** sales administrative assistant, replaces Mr. Leber.

The Edison storage battery business was recently purchased by the **Electric Storage Battery Co.,** from the **McGraw-Edison Co.** Now Known as the Nickel Alkaline Battery Division, the former Thomas A. Edison Industries storage battery unit of McGraw-Edison continues to be headed by **Robert A. Weeks, Jr.,** division manager, and by **James A. Mustard, Jr.,** general sales manager. The new division reports to **Monroe G. Smith,** vice president of ESB.

Raymond L. Thomas, service engineer, Primary Battery division, **Thomas A. Edison Industries of McGraw-Edison Co.,** Richmond, Va., has been promoted to field engineer there.

Philip J. Parker has been appointed general sales manager of **Sperry Products Co.,** division of Howe Sound Co., Danbury, Conn. Mr. Parker was formerly executive vice president of Peterson Machine Tool Inc., Merriam, Kan., acquired recently by Sperry Products.

William R. Vail has been appointed assistant manager of the refrigerator car division, **North American Car Corp.,** succeeding **H. Russell Platt III,** named manager of tank car sales. **George A. Chmelik** has been appointed manager of tank car service, and **Edna Sitts,** supervisor of tank car service.

Campcars

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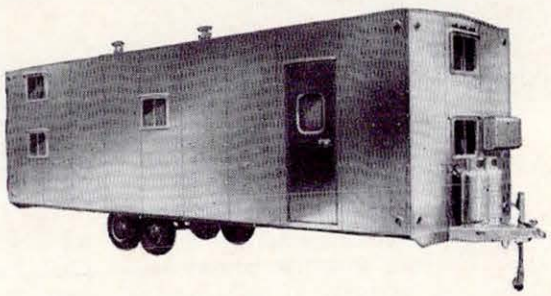

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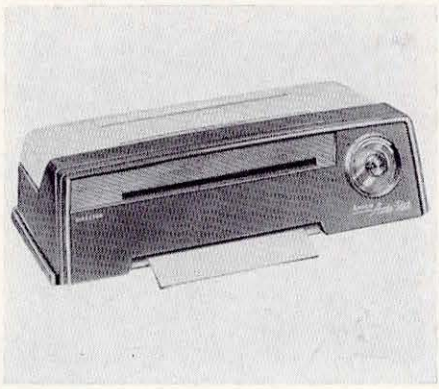
New Products Report

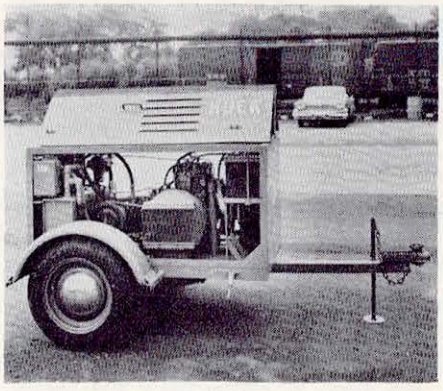
Urethane Dust Guard

The Stanform journal-box dust guard, made from a special formulation of polyurethane foam, is said to have outstanding resistance to high and low temperature ranges and to be chemically resistant to oils. Standard Plastics and the Reading cooperated in its development. MU commuter cars and freight cars equipped with the guards are said to be giving satisfactory results on the Reading. *Standard Plastics, Inc., Dept. RA, Fogelsville, Pa.*



Compact Photocopier

The Director "Auto-Stat" is a desktop unit that fills a multi-unit need because of compact size and ease of operation. In addition to simple push-button operation, its "speed feed" feature steps up the copying cycle. Documents are produced in less than 20 seconds. The Director occupies only 11 by 20 in. of desk space, weighs 25 lb, and costs $227.50. *American Photocopy Equipment Co., Dept. RA, 2100 West Dempster Street, Evanston, Ill.*



Hydraulic Power Unit

The Model 905G gasoline-engine-driven Powerig is "transportable" because of its integral two-wheel trailer. It will operate existing Huck hydraulic installation tools where pneumatic or electrical power is not readily available, delivering power at pressures up to 5,000 psi. With it, all Huck fasteners, including the ¾-in. diameter mild steel Huck-bolt, can be installed. *Huck Manufacturing Co., Dept. RA, 2480 Bellevue Ave., Detroit 7, Mich.*

High-Strength Bolts

Newly designed high-strength bolts are available which are said to have a greater bearing area under the head because the width of the hexagon head has been increased to the same width as the nut. Ranging in diameter from ½ to 1½ in., the new bolts conform to the latest edition of ASTM specification A-325 and are stated to allow tension to be raised from 90 to 100% of minimum proof load. The new minimum bolt tension ranges from 12,050 psi for ½-in. bolts to 103,950 psi for 1½-in. bolts. The heads of the new bolts will be marked with three radial lines and the symbol A-325.

The bolts and nuts are specially heat treated and are impact formed from controlled analysis carbon steel. Features claimed for the bolts include high clamping force, excellent fatigue resistance and ease of installation. The manufacturer points out that one of the advantages of the new bolts is that both bolt and nut can be torqued with the same size wrench or socket. *Screw & Bolt Corp. of America, Dept. RA, Pittsburgh 30. Pa.*

Computer Reads Business Forms

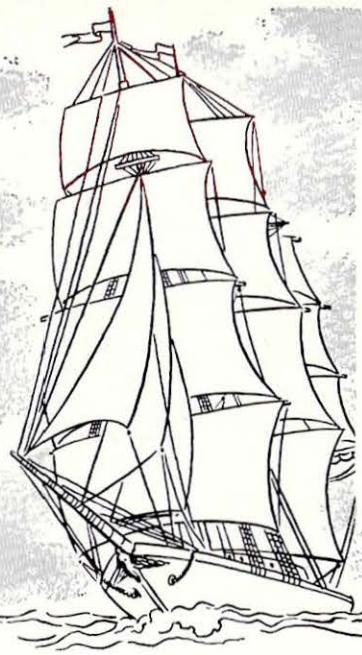
The NCR 390 is an electronic computer able to read and process a conventional business document which can be read instantly by employees. The magnetic coating consists of four vertical strips that record all pertinent data and tell the computer how to handle the account. The front of the ledger card looks like any conventional business form and contains pertinent printed information. The input to the device utilizes a magnetic coating on the back of regular ledger cards. The 390 is a complete computer system able to sort, summarize, compare, calculate, accumulate, and handle exceptions and control auxiliaries. The unit has a 200-word core memory, and programs, which can be internally stored, can be varied without plugboards. It will accept all conventional computer inputs and the magnetic ledgers simultaneously. The four output methods are: magnetic ledger cards, punched cards, tape, or printed forms. It can complete a 1,000-employee payroll in a half day. It is available for sale or lease. *National Cash Register Co., Dept. RA, Dayton 9, Ohio.*

Univac III

This new computer system is reported to have a processing speed nine times faster than its predecessor, Univac II. Solid state components are used in place of electron tubes, reducing heat and maintenance problems. The system has a "program interrupt" feature that automatically tells the computer when its peripheral equipment has finished a task so it can instantly be put to work again. Reading, writing and computing can be carried on simultaneously with a reading and writing rate of 200,000 digits a second. Typewriter communication in English can be maintained between the operator and the computer without use of complex mathematical symbols. Magnetic core memories can hold up to 16,384 words and can be expanded to double that amount. The machine will work with magnetic tape and punched cards. The card reader operates at 700 cards a minute, the printer at 700 lines a minute. A card punching printer can be used for cards which must be both punched and printed. *Remington Rand, Dept. RA, 315 Park Ave., South, New York 10.*

Why Rust-Oleum is different—

and what this difference, backed by 35 years of industry proof, means to you!



A Sea Captain developed it . . . Industry proved it!

The original Rust-Oleum formula was developed nearly fifty years ago by Sea Captain Robert Fergusson, who became intrigued with the rust-stopping qualities of fish oil early in his career. Creating a *special treatment* for the fish oil, he used the *specially-processed fish oil* as the vehicle in combination with fine rust-inhibiting pigments. The result? A coating that actually *stopped rust* when applied directly over sound rusted surfaces, after scraping and wirebrushing to remove rust scale and loose rust. Possible, because the *specially-processed* fish oil penetrated the rust to bare metal. This was the birth of Rust-Oleum's *exclusive* 769 Damp-Proof Red Primer.

AS ALWAYS, QUALITY IS YOUR BEST BUY

Whether it's the Rust-Oleum New Color Horizons System of primers and colorful top coats to stop rust and beautify buildings, bridges, tanks, towers, etc.,— or R-570, the new one-coat, work-horse finish for rolling stock—Rust-Oleum quality can help to save you time, money, and costly metal. See for yourself. Consult your Rust-Oleum Railroad Specialist, or write for complete information including actual color standards.

RUST-OLEUM®

There are imitations, but only *one* Rust-Oleum. It is distinctive as your own fingerprint.

STOPS RUST!®

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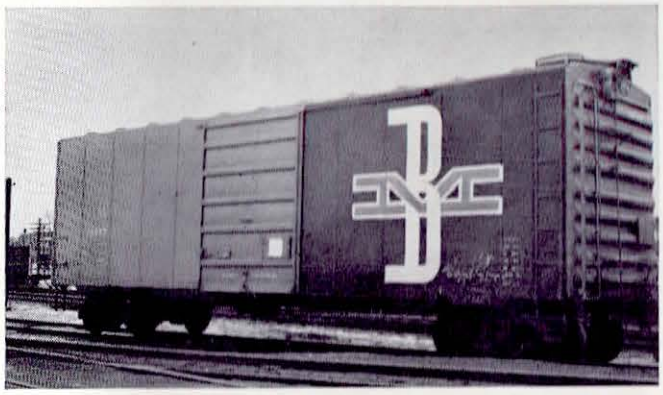
2631 Dempster St., Evanston, Illinois

Please send me the following at no cost or obligation:

- ☐ New 1960 New Color Horizons System Catalog —38 pages of factual information including color standards.
- ☐ Free test sample of Rust-Oleum 769 Damp-Proof Red Primer to be applied over sound rusted surfaces.



N-S-F® EQUIPPED CARS DELIVER SACKED GOODS FREE OF RIP DAMAGE

One false move on a rough cargo-worn freight car floor is all it takes to rip the profit out of sacked goods.

It's happened! But not to Union Carbide Plastics Co., a division of Union Carbide Corp., of Bound Brook, N. J.—because the Boston & Maine carries their sacked goods in cars equipped with NAILABLE STEEL FLOORING by Stran-Steel.

In the words of Union Carbide's Traffic Representative:

"We are always glad to have cars with Stran-Steel flooring spotted on our siding. It means safe handling for our plastics."

No wonder the Boston & Maine banks on N-S-F to reduce cargo damage claims. What's more, N-S-F adds longer in-service life to B & M rolling stock because it actually gives structural strength to critical underframe parts. Results: more class A cars available more often for more kinds of lading.

Seventy-five top-ranking railroads and their customers look to over 75,000 N-S-F equipped cars now in service for sound en route lading protection. They know that sacked goods are safe from rip damage, that patented nailing grooves allow travel-firm blocking of heavy lading; that even fine bulk cargoes are shipped securely, because N-S-F stays tight.

Full information and cost studies on the use of NAILABLE STEEL FLOORING in freight cars are readily available through Stran-Steel representatives in Chicago, New York, Philadelphia, St. Louis, San Francisco, Minneapolis and Atlanta. In Canada, N-S-F is made and sold by International Equipment Co., Ltd., Montreal. Stran-Steel Corporation, Detroit 29, Mich.

Stran Steel®

N-S-F

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PHENOLIC
PLASTIC

50% MORE PROTECTION

This, the Waugh-Gould Type 700 Friction Rubber Draft Gear, is the highest capacity standard pocket draft gear ever approved by the A.A.R. Providing protection unequalled by any standard pocket all-friction gear, the 700 gear may be expected to materially reduce car damage and maintenance costs. For better car service and longer car life specify the Waugh-Gould Type 700 Friction Rubber Draft Gear on your next order.

The WAUGH-GOULD TYPE 700 FRICTION-RUBBER DRAFT GEAR

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MARKET OUTLOOK *at a glance*

Carloadings

Loadings of revenue freight in the week ended Sept. 3 were not available as this issue went to press.

Loadings of revenue freight for the week ended Aug. 27 totaled 594,770 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CARLOADINGS
For the week ended Saturday, Aug. 27

District	1960	1959	1958
Eastern	83,338	77,980	91,630
Allegheny	97,728	80,439	108,973
Pocahontas	50,804	47,799	55,355
Southern	105,615	112,161	111,541
Northwestern	103,684	67,610	104,112
Central Western	106,737	113,994	124,592
Southwestern	46,864	48,894	50,023
Total Western Districts	257,285	230,498	278,727
Total All Roads	594,770	548,877	646,226
Commodities:			
Grain and grain products	52,913	49,044	54,313
Livestock	4,644	5,583	5,632
Coal	105,015	101,663	116,665
Coke	4,958	2,877	6,412
Forest Products	39,821	42,725	37,618
Ore	61,673	9,081	56,881
Merchandise l.c.l.	35,613	42,235	51,627
Miscellaneous	290,133	295,669	317,078
Aug. 27	594,770	548,877	646,226
Aug. 20	596,339	542,486	634,231
Aug. 13	599,908	544,569	626,314
Aug. 6	594,329	532,259	619,204
July 30	614,236	544,862	622,678
Cumulative total, 34 weeks	20,372,528	20,655,222	19,122,705

PIGGYBACK CARLOADINGS.—U.S. piggyback loadings for the week ended Aug. 27 totaled 10,774 cars, compared with 8,643 for the corresponding 1959 week. Loadings for 1960 up to Aug. 27 totaled 359,288 cars, compared with 265,859 for the corresponding period of 1959.

IN CANADA.—Carloadings for the seven-day period ended Aug. 21 totaled 76,289 cars, compared with 73,875 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
Aug. 21, 1960	76,289	24,036
Aug. 21, 1959	80,664	24,465
Cumulative Totals		
Aug. 21, 1960	2,331,157	914,012
Aug. 21, 1959	2,420,108	903,067

New Equipment

► *Union Tank Car.*—Has experienced "a marked increase in tank car rental business involving the building of new cars, nearly half of them to be of 20,000 gallons capacity or more." According to President E. A. Locke, Jr., Union Tank will complete construction of about 500 cars at Whiting, Ind., company shops this year, compared to a total of approximately 200 cars in 1959.

FOREIGN

►*Iranian State Railways.*—Requested bids by Oct. 4 for the supply of 3,000 truck springs, 2,000 for U.S. freight cars and 1,000 for German-type freight cars. Further information may be obtained from the Foreign Service Operations Staff, Bureau of Foreign Commerce, U.S. Department of Commerce, Washington 6, D.C.

New Facilities

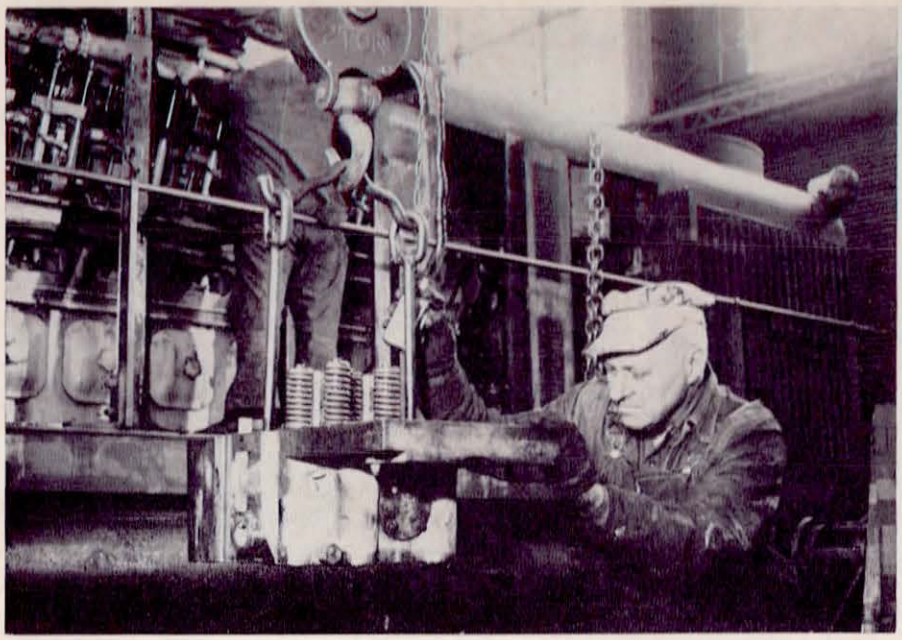
► *Atchinson, Topeka & Santa Fe.*—Ordered CTC equipment from Union Switch & Signal for installation between Lubbock Jct., Tex., and Texico, N. M., 88.4 miles. Control will be from an addition to an existing Style C machine located at Slaton, Tex.

► *New York City Transit Authority.*—Announced that it is exploring a possible two-way communication system between subway trains and a central location. The device—to be operated over a coaxial cable connected to trains through the third-rail power system—has been under study for several months, NYCTA reported. Cost of installing sending and receiving equipment in motormen's cabs on all three subway divisions was estimated to be between $5,000,000 and $10,000,000.

► *Ten major oil companies.*—Are planning a 200-mile pipeline to cost $19,000,000 along the C&NW rigrt-of-way between Chicago and Milwaukee and to extend to Green Bay, Wis.

► *Turkey.*—Substructure is being laid in eastern Turkey for a 64-mile extension of Turkey's railroad network. When completed, it will open eight provinces to year-round access to western markets. U.S. Development Loan Fund recently provided the Turkish government with $6,000,000 to cover foreign exchange costs for construction of this portion of Central Treaty Organization (CENTO)—sponsored Turkey-Iran railway.

► *Western Maryland.*—Has begun construction of double-car float facilities at Port Covington, Md, involving changes in support yard and a double crossover to permit loading and unloading simultaneously, at a cost of $400,000 and dredging and modification of tie-up rack and fender systems at Sparrows Point, Md., at a cost of $250,000.



MAINTENANCE of road switchers is handled by road's Warwick, N.Y., shop.

Engine Upgrading Cuts L&HR Maintenance Costs

► **The Story at a Glance: In the last eight years the Lehigh & Hudson River's motive power repair costs per gallon of fuel consumed have averaged 12 cents per year. In 1959, two years after the railroad completed modernization of its diesel fleet, the L&HR spent 8½ cents per gallon on locomotive upkeep and maintenance.**

Lehigh & Hudson River attributes its impressive improvement in repair costs per gallon figures to two things: first, its original equipment Alco 1600's with Model 244 engines have been upgraded to Model 250 prime movers, and, second, a thorough, realistic maintenance program is carried out.

The L&HR pegs its figures on repair costs per gallon of fuel consumed. This method, it feels, provides the basis for a true comparison with repair costs on any railroad, regardless of annual mileages. The accompanying table lists the annual mileage and the repair costs per gallon for each year since the L&HR dieselized.

The road switched from steam to diesel in 1950, and in the first eleven months of the transition took delivery of eleven Alco 1600-hp road switchers. Two others were received shortly thereafter, and the 13 locomotives have powered its trains since.

L&HR Locomotive Mileage and Repair Costs

Year	Mileage	Repair Cost per Gallon Consumed
1951.....	626,926	$0.0785
1952.....	642,035	0.0889
1953.....	665,006	0.0935
1954.....	713,649	0.0950
1955.....	714,420	0.1440
1956.....	711,044	0.1511
1957.....	688,709	0.2000(1)
1958.....	660,800	0.1574
1959.....	695,070	0.0850

(1) Unit exchange program on diesel engines undertaken in 1957 and completed in 1958

In 1957, following the recommendation of the builder, the L&HR embarked on a unit exchange program for the diesel engines, starting the switchover from Model 244 engines to the modernized 244, or what Alco now calls its Model 250 engine. The 250 incorporates in the 244 block all the improvements of the more up-to-date 251 engine possible within the physical limitations of the older block.

The L&HR shop handled removal of the Model 244 engines and installations of the 250 engines. It did each changeout job, including an annual inspection on the locomotive, in 10 to 14 days. The road did not consider rebuilding the engines in its shops because to do so would have taken each locomotive out of service for about three months. Also, it preferred to rely on the manufacturer for that service.

At the time the conversions were made, the L&HR installed oil-bath air filters on all 13 locomotives. By use of oil-bath filters and other improvements in the 250 engine the road has extended the inspection intervals on the locomotives from those originally set up for its motive power. This has been due in part to Alco's progress in improving metallurgies, as well as to the road's operations, which involve only 50,000 to 60,000 miles of service per locomotive each year. Inspections at the two-year mark from engine changeout have showed no indication of stress on cylinders or bearings. This result is attributed to the ability of oil-bath filtration to remove silicon particles before they cause damage.

The L&HR's locomotive inspection program begins with the routine daily, and ICC requirement, and progresses through the semi-monthly, monthly, quarterly, semi-annual, annual, two-year and four-year checkups. The annual, of course, includes all items required for the daily or trip, monthly, semi-monthly, quarterly and semi-annual work, plus 13 mechanical operations, six lubrications and eleven electrical steps. The road believes "preventive maintenance is good economics." Many potential failures found during daily inspections are corrected on the spot. The periodic maintenance schedules set up by the road coincide with the manufacturer's recommendations.

Eleven Locomotives Available

The L&HR keeps 11 locomotives available from Monday to Friday, with 12 on the rails on Saturday and Sunday. The crew available to meet this maintenance schedule includes ten machinists, four electricians, a welder, five laborers, two hostlers, six carmen and three foremen. The shop at Warwick, N.Y., works two tricks each day, five days a week, and with a reduced force on two tricks on Saturday and Sunday.

In that time, L&HR shopmen maintain 13 locomotives and perform regular upkeep on 62 covered hopper cars, three low-side gondolas, and eight cabooses, besides any necessary work on foreign freight cars and work equipment.

Locomotive No. 13 can be cited as an example of the road's maintenance program. It has run 121,000 miles over a two-year period since engine changeout early in 1958 without lube-oil change. The unit was originally delivered in October, 1951, and has operated over 469,710 miles of revenue service in less than nine years.

14 Roads Get Harriman Awards

► **The Story at a Glance: Fourteen railroads with notable safety records for 1959 were announced last week as winners of the E. H. Harriman Memorial Awards of the American Museum of Safety. Citations will be presented to the winning roads at a dinner in New York this week.**

Atlantic Coast Line, Chicago & Eastern Illinois and Canadian Pacific Lines in Maine will receive E. H. Harriman Memorial Award gold medals this week for chalking up the best overall safety records in their respective categories during 1959.

Eleven other roads, which scored the best safety records in their respective regions and size groups, will receive certificates of commendation.

The awards will be presented at a dinner at the Hotel Roosevelt in New York City, Sept. 14. The medals and certificates will be presented to representatives of the winning railroads by James G. Lyne, editor of Railway Age and chairman of the Harriman Awards Committee. Presiding over the dinner will be Cyril Ainsworth, president of the American Museum of Safety, which administers the awards.

Atlantic Coast Line Railroad Company, including its affiliate, the Charleston & Western Carolina Railway, will receive the gold medal for Group A, representing large lines.

The gold medal for Group B, composed of medium-sized carriers, will go to Chicago & Eastern Illinois, and the Group C gold medal will go to Canadian Pacific Lines in Maine, representing the smaller carriers.

Certificates of Commendation in each group will go to the following Class I roads:

- Group A—East, Erie; South, Illinois Central; West, Northern Pacific.
- Group B—East, Lehigh Valley; South, Central of Georgia; West, Denver & Rio Grande Western.
- Group C—East, Monongahela Railway; South, Clinchfield Railroad; West, the Texas Mexican Railway.

In addition to the line-haul railroads from each region, two switching and terminal companies will also receive certificates. Winners in this group are the Baltimore & Ohio Chicago Terminal Railroad, representing larger companies, and the Kentucky & Indiana Terminal Railroad, representing smaller terminal roads.

This will be the 41st presentation of the coveted awards, which were established in 1913 by the late Mrs. Mary W. Harriman in memory of her husband, a railroad pioneer.

The Harriman awards have been continued over the years by two sons of E. H. Harriman: W. Averell Harriman, former governor of New York, and E. Roland Harriman, chairman of the American National Red Cross.

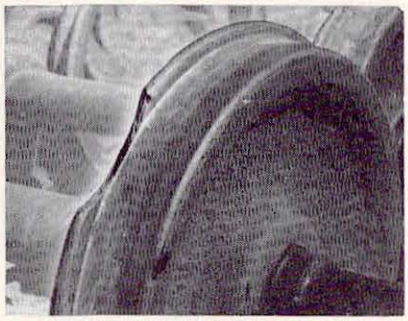
Interstate Commerce Commission statistics are used to determine the railroads and related firms with the best overall safety records for each year. The safety ratings include casualties to passengers on trains and in train and train-service accidents and casualties to employees on duty in train, train-service and non-train accidents.

Gold medals are awarded only to Class I roads that carry both passengers and freight (and have at least 100,000 or more passenger-miles of service). The carriers are divided into three size groupings on the basis of the total locomotive-miles of service. Group A includes roads with 15,000,000 locomotive miles and more; Group B includes roads with 3,000,000 to 15,000,000 locomotive miles; Group C includes roads with 200,000 to 3,000,000 locomotive miles. Gold medal awards are not subdivided by regions.

Certificates of commendation—which are awarded to roads that handle freight only as well as to those with both passenger and freight service—are awarded to nine Class I railroads and two switching and terminal companies annually. Three roads from each group are chosen to represent their respective categories in the Eastern, Southern and Western districts. The switching and terminal company awards are given to the company with the best safety record among companies reporting 2,000,000 or more man-hours per year, and to the company with the best record from the group reporting fewer than 2,000,000 man-hours.

Winners of the awards may not receive a medal or certificate for two straight years.

Paul F. Stricker, managing director of the American Museum of Safety, is secretary of the awards committee, which is headed by Mr. Lyne. Committee members include Harold F. Hammond, executive vice president of the Transportation Association of America; ICC Commissioner Everett Hutchinson; Joe W. Kizzia, executive editor of Railway Age; E. G. Plowman, vice president of United States Steel Corp.; ICC Commissioner Kenneth H. Tuggle; Owen Clarke, vice president of the Chesapeake & Ohio Railway; Stanfield B. Johnson, chairman of the Association of Southeastern Railroads; David I. Mackie, chairman of the Eastern Railroad Presidents Conference; C. M. Roddewig, president of the Association of Western Railways; and J. Handly Wright, vice president of the Association of American Railroads.



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TAXMEN HEAR RAILROAD WOES (*Continued from page 65*)

should be by the use of government credit . . .

"The Philadelphia Plan not only provides bargain fares for commuters; it also provides a bargain for the taxpayers. Every dollar spent by government to solve the mass transportation problem will return at least a thousand dollars of dividends in savings on highway costs and above all in revitalizing the cores of our great urban centers—the major cities themselves."

C&NW's vice president and comptroller, Larry S. Provo, said that, in 1959, his road's suburban revenues were $12,395,000 with a net income from suburban operations of $30,000. This, he complained, was "certainly inadequate when compared with the $4,600,000 that would be required to yield a 6% return on our investment in suburban facilities."

Mr. Provo then detailed improvements C&NW has made in its suburban program. Included were new equipment, station closings, discontinuance of little-used trains, advertising to attract riders, a new ticket-pricing structure, etc. He added that a bill was introduced into the Illinois legislature last year that would have reduced the road's Illinois taxes $750,000, if it had been passed.

Mr. Provo concluded his statement by saying: "In summary, on the North Western we consider suburban service an important part of our business. If management is given greater freedom to operate the service, if equitable tax assessments are made and if broad public policies are determined on the basis of majority rather than vocal minority requirements, we believe that suburban can start to make a contribution to the financial wherewithal of our company and become a greater mass transportation asset in our metropolitan area."

Oral Argument Date Set in Rate Case

The ICC will hear oral argument Oct. 18 on the question of whether to suspend in whole or in part the general rate-increase tariffs which have been filed by the railroads with an Oct. 24 effective date. Procedures culminating in the oral argument have been prescribed by the Commission for the case which has been docketed as Ex Parte No. 223.

The increases sought by the rail-

Watching Washington *with Walter Taft*

• **ONLY TWO ACTS** of general interest to the railroads were passed by Congress at its 1960 session which adjourned Sept. 2. The new acts will amend present laws relating to reporting of railroad accidents and the transportation of explosives and other dangerous articles. Neither was opposed by the railroad industry.

THE ACCIDENT-REPORTS ACT is a compromise version of a more drastic bill, which was sponsored by the Railway Labor Executives Association and opposed by the railroads. The compromise was worked out by RLEA and the AAR, and the ICC joined in recommending it to Congress. It will leave the Commission with discretion to determine what accidents are reportable, but contemplates that the Commission will amend its reporting rules, some of which RLEA does not like.

THE TRANSPORT-OF-EXPLOSIVES ACT extends coverage of the present law to additional carriers and commodities, principally radioactive materials. New carriers covered will be contract and private carriers. Only common carriers are subject to the present law, although some explosive-and-dangerous-articles regulations have been applied to contract and private carriers under the safety laws to which they are subject.

THE TRUCKING INDUSTRY failed in its undertaking to persuade Congress that it should eliminate the present law's specific reference to the AAR's Bureau for the Safe Transportation of Explosives and Other Dangerous Articles. The reference is in a provision which authorizes the ICC to utilize services of the bureau. However, the new act does broaden the provision to permit utilization also of services of other carrier and shipper associations.

THE ADJOURNMENT ended the 86th Congress's last session—unless there is a special session, which is not expected. Thus all proposed legislation left pending at various stages short of final enactment is now dead.

ELECTIONS come in November, so it will be a new Congress which convenes next January. Most of the dead bills will be reintroduced, of course. But they'll all be back at the starting line.

PROPOSALS THUS KILLED include such top-priority items on the RLEA program as the track-car bill, which would give the ICC power to prescribe rules for operation of track motor cars, and a bill to repeal or emasculate the so-called train-off (service abandonment) provisions of the 1958 Transportation Act.

DEFEAT of these and other "make-work" proposals on RLEA's list amount to big management wins in an election-year session. Meanwhile, however, nothing was done about management's own program which includes calls for freedom to operate other forms of transport, user charges on publicly-provided transport facilities, tax relief to permit more realistic depreciation and amortization arrangements, and repeal or extension to railroads of Interstate Commerce Act provisions which leave the trucking of agricultural commodities and water transportation of bulk commodities free of regulation.

MOREOVER, the same Congress did something really big for RLEA in its 1959 session. It passed the act which liberalized benefit provisions of the Railroad Retirement and Railroad Unemployment Insurance Acts.

roads would raise practically all their rates and charges, but they would average less than any previous general increase. Also, they would all be in flat amounts, not percentages of existing rates (RA, Sept. 5, p. 34).

In filing their tariffs, the railroads asked the Commission to clear the way for the increases by granting necessary relief from Section 4 and from outstanding maximum-rate orders. The oral argument will be addressed to these relief proposals as well as to the question of letting the tariffs become effective. In the latter connection, the railroads have offered to make refunds if the Commission, after full investigation, fails to approve any of the increases.

The pre-argument procedures call for filing statements in support of the tariffs on or before Sept. 21. Opposition statements are due by Oct. 10, and statements in reply to the latter are due by Oct. 17. The oral argument will be heard by the entire Commission at its Washington, D. C., headquarters.

MeC Inaugurates Faster Mail-Merchandise Moves

High-priority freight, mail, milk and express are moving faster on the Maine Central. Special mail-merchandise trains began to move on new schedules Sept. 6, the day regularly scheduled passenger-train service was discontinued. The road says that continuance of the speedier service with its better connections, depends on patronage by shippers and on MeC's retention of the U.S. Post Office Department mail-carrying contract. The present move is termed "an experiment with a new railroading concept."

The "experiment" involves two round-trip trains between Portland and Bangor, and one between Bangor and Vanceboro. One train leaving Bangor freight yard at 3:55 p.m. offers overnight freight service from Bangor to Boston; Mechanicville, N.Y.; and St. Johnsbury, Vt. This service is possible, the Maine Central says, through better connections with the Boston & Maine at Portland, and with the MeC's own train for St. Johnsbury. A later mail-merchandise train leaving Bangor at 9:35 p.m. also provides a good connection with the B&M at Portland for Mechanicville.

Eastbound mail-merchandise trains leave Portland at 12:15 a.m. and 9:15 p.m., the latter connecting with the Bangor & Aroostook for Presque Isle and other points in Aroostook County.

All merchandise trains will be limited in length to make rapid switching moves possible.

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You Ought To Know...

Construction costs and costs of equipment for modern urban transportation systems "should be part of the general tax plan and cost of operation alone should be used as a basis for the fare structure," according to Col. S. H. Bingham (Ret.) of New York. Col. Bingham, addressing the Institute de Engenharia in Sao Paulo, Brazil, pointed out that transportation is of benefit to every individual in the community and that "it is therefore logical and reasonable to expect every individual taxpayer and every business corporation to share in the responsibility for the cost of construction and equipment."

DL&W President Perry Shoemaker will address Allied Railway Supply Associations men's luncheon in Chicago, Tuesday, September 13. The luncheon honoring all railroad presidents is being held in connection with the annual AAR Coordinated Mechanical Associations Convention now in progress.

One-day coal dumping record has been chalked up by Chesapeake & Ohio at its Presque Isle docks at Toledo. A total of 2,500 cars, carrying 122,751 tons of coal were dumped into Great Lakes vessels on Sunday, Sept. 4, breaking the all-time record of 119,675 tons set in June 1950. Better business, increased industrial activity, good shipping weather and availability of boats accounted for the record day, C&O says.

Coordinated air freight-surface express service to non-airport points continues to expand. An interline agreement was signed last week by the Railway Express Agency and Eastern Air Lines. Similar agreements have already been signed by REA and nine other domestic airlines (RA, Sept. 5, p. 11).

Ottawa's Union Station reconstruction is scheduled to begin in the near future. The National Capital Commission is expected to apply within a month to the Board of Transport Commissioners for the first two links to clear large sections of city trackage. The program, including relocation and construction of a new Union Station will cost $12,000,000.

Pullman porter William Tyler, 78 years old and retired since 1938, won $140,000 last spring in the Irish Hospitals Sweepstakes. With part of the money, he decided to see the United States in style, so he hired a Pullman car to carry himself, his wife, his landlady and five other friends on the grand tour. Mr. Tyler estimates the trip will cost $15,000, says if he wins again, he'll come back.

Port of New York Authority will make a study of the planning, financing and activation of a World Trade Center at the Port of New York. The study is being made at the request of the governors of the States of New York and New Jersey and the mayor of the City of New York. The area proposed for the center is a 13½-acre site in lower Manhattan, which would contain a proposed World Trade Mart, a World Trade Commerce Building and a Central Commodity Exchange.

Railroad use of pre-stressed concrete and its future possibilities, particularly in bridges and ties, will be the subject of a talk at the sixth annual convention of the Prestressed Concrete Institute. Frank R. Woolford, chief engineer of the Western Pacific will speak at the affair, which will be held Sept. 27-30 at the Hotel Statler-Hilton in New York.

A new rail link between the Pacific Great Eastern Railway and the Northern Alberta Railway has been proposed by Premier W. A. C. Bennett of British Columbia. Mr. Bennett, who as Premier is also head of the provincially owned PGE, suggested a $25,000,000 line from Fort St. John on the PGE to Hines Creek on the NAR. The two roads now meet at Dawson Creek, south of the proposed line.

Southern Railway has been granted permission to intervene as a party in opposition to the application by Seaboard Air Line and Atlantic Coast Line to merge. The ICC order approving Southern's position in the case, F.D. 21215, came Aug. 30.

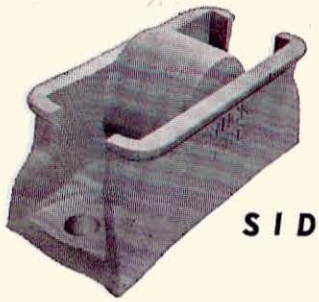
The Public Utilities Commission of California reports that railroads operating in that state had 28.34 casualties per million man-hours worked during 1959. Due to more stringent reporting requirements this is a substantial increase over 1958, but last year still ranks as the third safest since 1940.

Passenger train revenue per train-mile for the first half of 1960 showed a 14.2% increase over first-half 1959 results on the Missouri Pacific. During the same period, patronage increased 1.7%, passenger revenue went up 4%—and train-miles operated declined 9.8%.

Northwestern University will offer a 16-week credit course in railroad transportation, beginning Sept. 27 at NU's Chicago campus. The course will cover current trends and developments in railroad management. Registration closes Sept. 16.

CN-CP Telegraph message rates between Canada and the United States increased an average of 8.4% Sept. 1. The increase, between five and 10 cents per 10-word message, follows a similar increase in Western Union rates in the United States.

Canada's non-operating railway unions have agreed to accept a Federal Conciliation Board report recommending an hourly increase of 14 cents for a two-year contract. W. T. Wilson, CNR vice-president personnel, and D. I. McNeill, CPR vice-president, personnel, in a joint statement, commented: "The grave implications of the majority report are receiving continued study. Neither the public interest nor the position of the railways appears to have been seriously considered, and we are unable to comment further until a complete assessment of all these implications has been made."



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Buy Cars—or Say Why Not

A large Western railroad—and a prosperous one as railroads go—recently advertised that it had just acquired 30-odd miles of new freight equipment. More power to it. All of us who depend on railroads for a living would have reason to feel more comfortable about the future, if every railroad were able to make a similar claim for the adequacy of its improvement program.

As the old saying goes, the wheel that squeaks the loudest gets the grease—and management's bosses, the directors, are usually more concerned about this month's earnings, and this year's, than they are about problems certain to arise in 1961, 1962, or 1970.

Sufficient unto the day is the evil thereof—a wise observation, but not necessarily applicable in all situations. There is certainly an equally pertinent observation to be made from railroad experience the world over. Something like this:

The surest way there is for a railroad to lose traffic and to lose public support for equitable treatment, and hence to slip into government ownership, is to allow its plant, its equipment and its service to deteriorate.

Railroads are liberal in their expenditures for equipment renewal and other capital improvements, when they have the money to spend. When they don't have it, their usual practice is to maintain a discreet silence. Is such silence wise?

When traffic picks up and equipment shortages and other inadequacies develop, it is too late, then, to begin explaining. By that time the country will be in no mood to be told that, back in 1960, governmental neglect and mistreatment didn't allow the railroads to earn enough to equip themselves for future traffic demands.

The plain fact is that the railroads, as a whole, are not acquiring new cars at a rate sufficient to replace the old cars that are wearing out—to say nothing of making improvements as rapidly as desirable in the average quality of the supply. This failure is not of course, management's fault. You can't spend what you haven't got. But the end result is none the less unhappy and improvident. The average cost of cars is increased when they are purchased on the traditional feast-or-famine basis; and, in the long run, railroad investors and railroad patrons pay that extra cost.

There has been so much persiflage about the so-called "railroad crying towel" that many railroad men are self-conscious about hollering when hollering is what is urgently needed. Railroad people do talk a good deal about the dangers of government ownership—but people who have any direct recollection of the days of William Gibbs McAdoo are a small and diminishing minority. Most Americans—including many leaders of big business—have shown that they have no scruples whatever against government ownership of the means of transportation (as is evidenced by their support of the St. Lawrence and other inland waterways, and the gigantic highway program).

The one aspect of transportation the public does fully understand and appreciate is its need for transportation, and its exasperation whenever the service becomes unduly slow, inconvenient, congested and costly. Railroad service will become just that, if worn-out equipment is not adequately replaced and if normal progress in plant improvement does not occur. So the railroads have got something to raise their voices about, with a good chance that the public will listen.

Industrial companies that are earning three or four times the rate of return of the railroads are kicking constantly about the inadequate rate of their plant renewal and improvement. And the railroads, the low man on the totem pole, suffer on in practically complete silence. Why?

This paper rejoices to see the publicity given to their improvement programs by the relatively few railroads with the present means to carry such programs forward. But every competent management knows the tempo at which its maintenance, renewal and equipment acquisition *ought to be* progressing. With general business moving sideways or even downward, the public would be receptive to a report from railroad managements —either about their actual improvement programs or what these programs would be, if funds were available.

When you flag down a fellow headed into a washout, he won't complain that you're just waving a crying towel at him. Instead, he'll thank you for the warning—that is, if you convince him that there exists a real threat to his convenience and his standard of living. That threat is there and is easy to demonstrate. Every railroad management in the country has the facts and figures to prove it.

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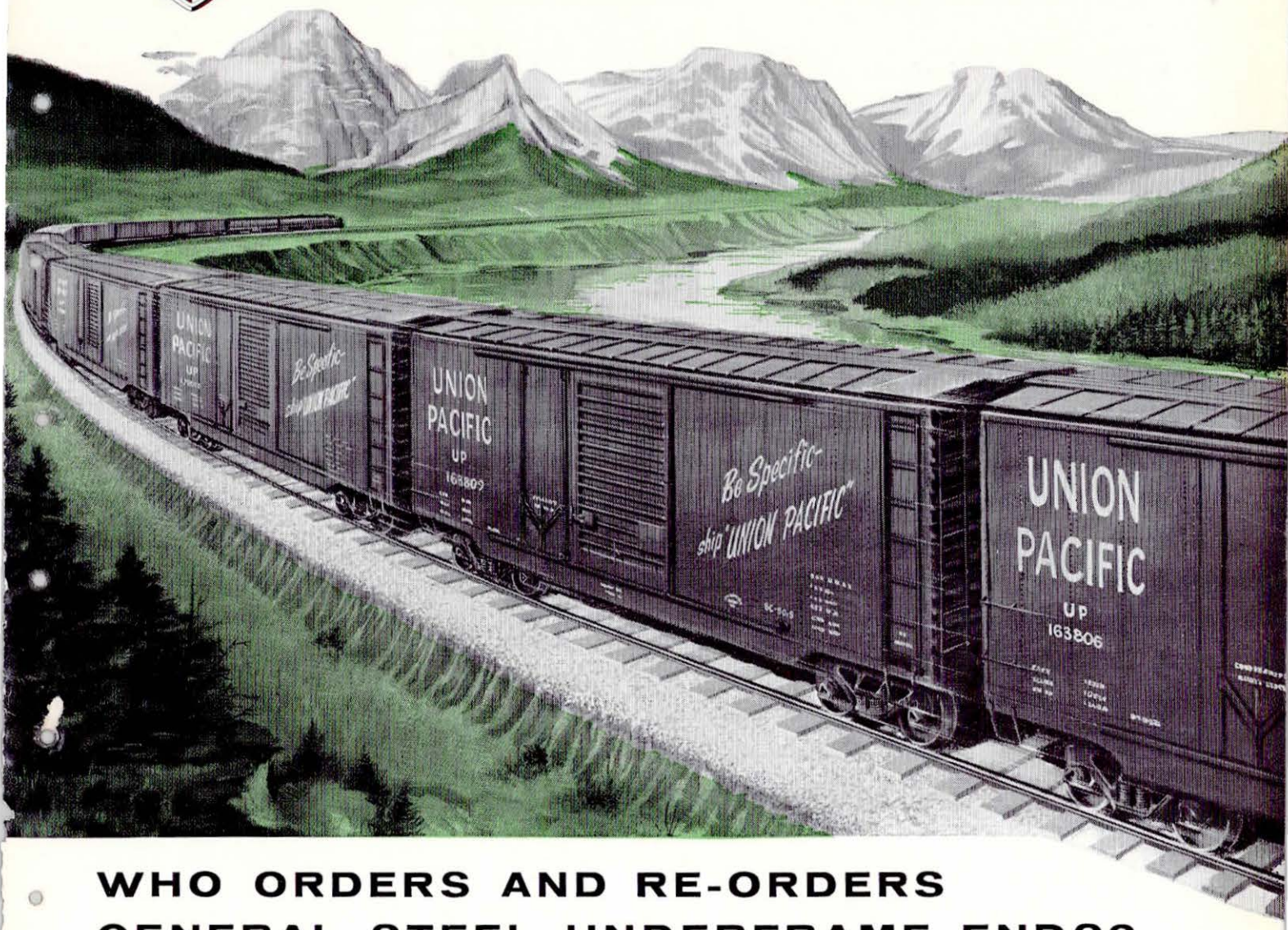

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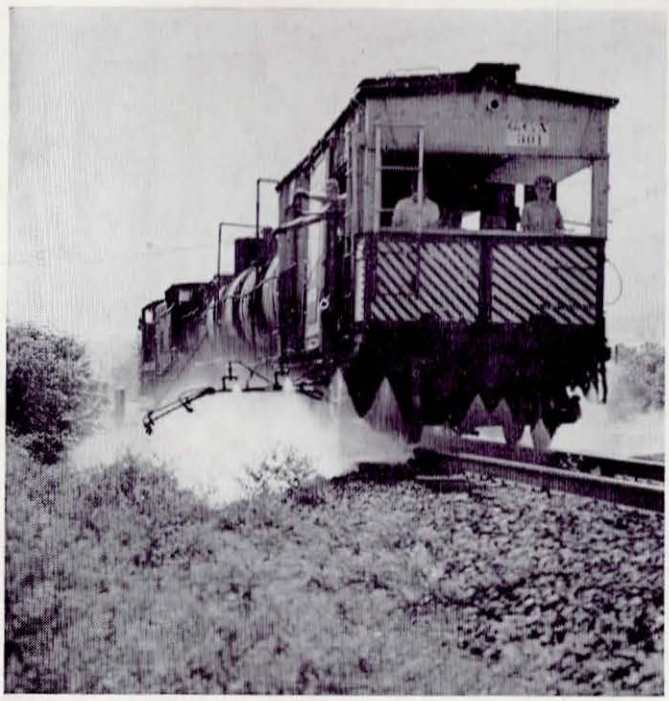

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